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ATTORNEYS FOR DEFENDANT  
OCEANOGRAFIA S.A. DE C.V.

UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

DREDGING INTERNATIONAL MEXICO S.A. DE  
C.V.,

Plaintiff,

-against-

OCEANOGRAFIA S.A. DE C.V.,

Defendant.

07 Civ.11394 (GEL)

**DECLARATION OF  
MANUEL JAUREZ PEREZ IN  
SUPPORT OF DEFENDANT'S  
MOTION FOR COUNTER-  
SECURITY PURSUANT TO  
SUPPLEMENTAL RULE E(7)**

I, Manuel Juarez Perez, of Calle Jaral No. 15 Col. Delicias, Casado, Mexico, a resident of the Mexico, declare under the penalty of perjury under the laws of the United States of America, pursuant to 28 U.S.C. §1746 that the following is true and correct:

1. I am a licensed civil engineer employed as the Coordinator of Maritime Pipelines and as a Project Manager by Defendant Oceanografia S.A. de C.V. ("Oceanografia"), having received my civil engineering degree from the Universidad Valle Bravo (with honors) in 1987. I submit this declaration in support of Oceanografia's motion for counter-security against Plaintiff Dredging International Mexico S.A. de C.V. (hereinafter "DIMEX").

## **EMPLOYMENT HISTORY**

2. I have been employed in the offshore marine construction industry for approximately 15 years and in the offshore oil industry for nearly 30 years. As Exhibit 1, I annex a copy of my curriculum vitae.

3. I was employed by Oceanografia as Manager of Construction and Maintenance of Oil Platforms in September 2005. In September 2006, I was promoted to the position of Coordinator of Maritime Pipelines for Oceanografia but also was appointed Project Manager (a subordinate position reporting to the Coordinator) for the KUMAZA Project, which oil pipeline marine construction project Oceanografia was awarded by PEMEX Exploration and Production ("PEMEX").

4. As Project Manager for the KUMAZA Project (the "Project"), amongst other things I am responsible for liaising with PEMEX's superintendent of the Project regarding the engineering, construction and pressure testing of the pipelines to be constructed under the Project. I also interact with PEMEX's superintendent in reviewing the progress of the Project in its entirety, including but not limited to issues concerning engineering, construction, logistics and progress payments. In my capacity of Project Manager for the Project, I am intimately familiar with the costs involved in performing the various construction operations, including but not limited to costs connected with (a) vessel chartering; (b) leasing of various equipment connected with the underwater construction project, including but not limited to submersible devices and sonar rigs for confirmation of the status of underwater construction operations; (c) construction materials; (d) insurance and performance bonds; and (e) labor.

5. As Coordinator of Maritime Pipelines, amongst other things I am responsible for the planning and estimates involved with bidding on maritime pipeline construction projects. This involves cost assessments for all areas of the anticipated project, including but not limited to costs associated with: (a) vessel chartering, operation and/or maintenance; (b) equipment purchasing, leasing or maintenance; (c) insurance and/or performance bonds; (d) construction materials; (e) labor; (f) subcontractors; and (g) divers. We chart the timing of expected operations against expected costs to provide a cost estimate for the particular project. As the Coordinator for Maritime Pipelines, it is my job to make accurate assessments of these costs in order to ensure that Oceanografia's project bids are competitive while not resulting in the company sustaining losses by underbidding its services.

6. Prior to my employment with Oceanografia, I was employed by Cotemar S.A. de C.V. from September 2003 until I commenced working for Oceanografia in September 2005. In my employment with Cotemar, I was the Coordinator of Platform Construction and Maintenance in charge of the approximately ten platform AKAL-C offshore oil refinery. In that position, I was responsible for the allocation of platform resources, including managing the refinery resources to be able to conduct maintenance or repair operations on certain platforms while maintaining refinery production.

7. Prior to my employment with Cotemar, I was employed in a variety of positions by Construcciones Maritimas Mexicanas S.A. de C.V. ("CMM") from 1994 until I commenced working for Cotemar in 2003. At the time that I was employed for CMM, it was one of the largest marine construction companies in Mexico and provided construction expertise services for anything related to construction in the oil industry, including but not limited to construction of offshore oil pipelines. During my employment with CMM, I first was employed as a field

engineer in 1994-95, during which time I was rotated through various positions in the company for training purposes. Amongst other positions, I served on board offshore vessels, worked in connection with platform installations and maintenance, worked on board barges in connection with offshore oil pipeline construction, and worked on a vessel bunkering terminal project including the installation of submerged product supply pipelines. From 1995 to the end of 1996, I was assigned as a Project Engineer in CMM's Department of Engineering. In that capacity, I was responsible for reviewing engineering designs and plans and troubleshooting engineering problems. At the end of 1996, I was promoted to the position of Superintendent of Pipelines for CMM, which position was very similar to the Coordinator of Maritime Pipelines position in which I presently serve for Oceanografia.

8. Prior to working with CMM, from 1980 through 1991 I worked in the oil industry (at times in conjunction with attending school) as a technician with PEMEX on both land-based oil drilling facilities and offshore oil platforms.

#### **THE PROJECT AND OCEANOGRAFIA'S DAMAGES**

9. From the time that it began, I have been the Project Manager for the Project, which is an offshore oil pipeline marine construction project in La Sonda de Campeche, an oil producing region of Mexico. As the Project Manager for Oceanografia on the Project and based on my experience in the offshore marine construction industry as described above, I am fully familiar with the events related below and with the statistics and market conditions related below.

10. In order to perform portions of its obligations under its contract for the Project with PEMEX (the "Main Contract"), Oceanografia retained DIMEX as a subcontractor under a

Subcontract Agreement dated November 26, 2006. A true and correct copy of the Subcontract Agreement with its exhibits is annexed hereto as Exhibit 2. Under the Main Contract, Oceanografia is scheduled to receive the amount of \$131,584,029.00 for performance of its services. Under the Subcontract Agreement, DIMEX was to have received \$14,269,762.00 for its portion of work performed under the Main Contract.

11. The Main Contract is considered a government contract. While I am not a lawyer, I am aware that Mexican law contains a provision applicable to government contracts whereby contractors are forbidden from bidding on future government contracts for three years after the default on a government contract.

12. The Subcontract only involved one segment of the Project called the Package L comprised of pipelines 48 and 50 ("KMZ 48" and "KMZ 50," respectively).

13. Under Section 2.1 of the Subcontract Agreement:

The SUBCONTRACTOR [DIMEX] undertakes to perform the work, supplies, products and services specified in the Exhibit B of this Subcontract Agreement related to Provision of Rock Dumping Services in respect to PEMEX Kumaza Package L Project, Mexico, hereinafter referred to as the "Services."

14. Under Section 2.2 of the Subcontract Agreement:

The SUBCONTRACTOR undertakes to perform the Services in accordance with this Subcontract Agreement, in a professional and careful manner.

15. Exhibit B of the Subcontract sets forth the "Scope of Work," and provides that DIMEX will perform, *inter alia*, both pre-lay and post-lay rock dumping to create a continuous berm along the length of the KMZ 48, though Oceanografia was responsible for the laying of the pipeline.

16. The purpose of the pre-lay rock dumping was to ensure separation between the coral reef and pipelines, and the purpose of the post-lay rock dumping was to support and stabilize the continuous pre-lay supports.

17. In order to perform its work under the Subcontract Agreement, DIMEX secured use of the "Dynamic Positioned Fall Pipe Vessel" TIDEWAY ROLLINGSTONE, which subsequently performed work on behalf of DIMEX under the Subcontract. The TIDEWAY ROLLINGSTONE has very special capabilities which made it uniquely appropriate for this construction project. It is equipped both with: (a) a dynamic positioning capability, which allows the vessel's satellite navigation system to interface with its propulsion system to keep the vessel correctly positioned continuously despite wind, currents, waves and other forces which affect a vessel at sea; and (b) a fall pipe, which is a telescoping pipe which can be extended off the stern of the vessel to the sea floor in order to accurately and precisely dump stones or other cargo on the sea floor.

18. Shortly after Oceanografia began laying the pipeline along the pre-lay rock berm route set by DIMEX, DIMEX admitted in a notice to Oceanografia that it had placed the pre-lay rock berm for KMZ 48 in the wrong location.

19. DIMEX's improper placement of the rock berm led to both a number of logistical problems and increased financial undertakings not anticipated under the Subcontract Agreement.

#### **KMZ 48**

20. The first immediate damages suffered by Oceanografia concerned the 2019.5 cubic meters of quarry rock, purchased for \$524,971.42 by Oceanografia, for pipe-lay use on the KMZ 48. When DIMEX laid the rock in the wrong location at the approximate depth of 275

feet, the materials were forever lost as it is physically impossible to move the misplaced quarry rock to the correct location.

21. PEMEX fined Oceanografia for construction delays of KMZ 48. Of the \$5,121,221.30 in fines spanning 112 days of work on KMZ 48, \$1,242,715.41 is directly attributable to DIMEX's breach of the Subcontract Agreement. This reduced amount reflected 27.17791667 days of delays in preparing a plan to correct the DIMEX errors and carrying out the plan with the use of a new vessel as DIMEX would no longer be associated with the KUMAZA project. As Coordinator of Maritime Pipelines for Oceanografia, I was the team leader in preparing and executing the plan to correct the DIMEX errors. True and correct copies of the two documents from PEMEX setting forth the fines for 102 days and 10 days of work on KMZ 48 respectively are annexed hereto as Exhibit 3.

22. DIMEX no longer is associated with the KUMAZA Project because it withdrew the TIDEWAY ROLLINGSTONE from the Project prior to completing its obligations under the Subcontract Agreement.

23. After DIMEX withdrew its vessel TIDEWAY ROLLINGSTONE from the KUMAZA project altogether, Oceanografia was required to employ the services of another vessel, the WITCH QUEEN, to correct the placement of the pipeline along the seabed. As owner of the WITCH QUEEN, Oceanografia fully is familiar with its market value. The eight days of work performed by the WITCH QUEEN in KMZ 48 pipeline re-placement, resulted in \$786,013.25 in damages.

**KMZ 50**

24. The DIMEX failures with regard to KMZ 48 impacted other aspects of the KUMAZA project as well. Another of Oceanografia's vessels, the BOLD ENDURANCE, was performing work on the KMZ 50, as per the Main Contract. These pipeline-related actions were delayed while Oceanografia completed its plan to continue its work on KMZ 50 without DIMEX.

25. DIMEX was to perform similar duties on the KMZ 50 pipeline area under the Subcontract Agreement. Just as with the KMZ 48, Oceanografia assumed the duties and responsibilities of DIMEX for KMZ 50 by employing the BOLD ENDURANCE in a different manner than was originally intended. This change in circumstances added \$2,476,231.00 in damages to complete rock berm placements on KMZ 50. With regard to the increased cost, this was associated with having to use a crane aboard the BOLD ENDURANCE to lower bags of cement to divers on the seabed in order to ensure the accuracy of placement of the rock berm. In comparison to the dynamic positioning fall pipe attributes of the TIDEWAY ROLLINGSTONE, which could perform the same job much more quickly, the additional time required and labor costs required were largely what caused the increased cost.

26. To date, in addition to the damages that Oceanografia has described above that were incurred to rectify DIMEX's default, Oceanografia also has suffered \$535,540.72 in lost profits on the KMZ 50 aspect of the KUMAZA project as a direct result of DIMEX's breach of the Subcontract Agreement.



**KMZ 50 & Other Parts of the KUMAZA Project**

27. The BOLD ENDURANCE would have completed its KUMAZA project duties before the annual bad weather season in the Sonda de Campeche, the body of water where the pipeline project was underway. Because of the DIMEX-related delays, the BOLD ENDURANCE was not able to perform its duties as the port was closed an aggregate of ten days due to inclement weather. Port reports from Mexico's Secretary of Communication and Transportation indicate ten days in which the port was closed due to inclement weather. I have annexed as Exhibit 4 true and correct copies of these port reports evidencing these port closings.

28. The daily hire rate for the BOLD ENDURANCE is \$176,219.63, the amount agreed upon by PEMEX and Oceanografia in another contract for similar duties. Using this hire rate for the KUMAZA project work (including KMZ 50), the ten-day weather delays resulted in \$1,762,190.63. I have annexed as Exhibit 5 a true and correct copy of the PEMEX document evidencing the daily hire established for the BOLD ENDURANCE for PEMEX projects.

29. Additionally, Oceanografia also is due US\$524,971.42 from DIMEX for 2019.5 cubic meters of quarry rock, which it purchased for the KMZ 48 pipeline, and which DIMEX rendered useless by admittedly laying it in the wrong location. A true and correct copy the document from PEMEX quantifying the amount of quarry rock that was mislaid and rendered useless on KMZ 48 is annexed hereto as Exhibit 6.

Executed this 25<sup>th</sup> day of March, 2008 at Isla del Carmen, Campeche, Mexico.



Manuel Juárez Perez

# **EXHIBIT 1**

## CURRICULUM VITAE

**NOMBRE:** MANUEL JUAREZ PEREZ  
**CIUDADANIA** MEXICANO  
**ESTADO CIVIL:** CASADO  
**DIRECCION:** CALLE JARAL No. 15 COL. DELICIAS  
**CIUDAD:** REYNOSA, TAMPS.  
**TELEFONO** (01 - 89-99) - 20 - 20 - 25  
(01 - 93-43) 44 - 01 - 90  
**E-mail :** mjuarez\_44@hotmail.com.mx

### EDUCACION PREPARATORIA

1977 - 1980 ESCUELA PREPARATORIA TEXCOCO  
BACHILLERATO UNICO DE ARQUITECTURA  
TEXCOCO EDO. DE MEXICO  
**OBTIENE** CERTIFICADO

### FORMACION PROFESIONAL

1982 A 1987 UNIVERSIDAD VALLE BRAVO  
CD. REYNOSA, TAMPS.  
**OBTIENE** "DIPLOMA HONOR"  
POR APROVECHAMIENTO DURANTE LA FORMACION PROFESIONAL  
**OBTIENE** TITULO EN LA ESPECIALIDAD INGENIERO CIVIL

### CURSOS OBTENIDOS

1993 CENTRO DE CAPACITACIÓN E INVESTIGACIONES TECNOLÓGICAS  
INSTALACIONES ELÉCTRICAS RESIDENCIALES  
CD. REYNOSA, TAMPS.

**OBTIENE** DIPLOMA

**SIN CURSO** MANEJO DE EQUIPO DE COMPUTO (EXCEL, WORD, POWER POINT)

### SEMINARIOS

2002 CONSULTORES EN RECURSOS HUMANOS  
NUEVA CULTURA DE 9ºS  
CD. DEL CARMEN CAMPECHE  
**OBTIENE** DIPLOMA

2005 DESARROLLO ESTRATEGICO EMPRESARIAL PUESTA PUNTO  
MODULO DE DESARROLLO GERENCIAL  
CD. DEL CARMEN CAMPECHE  
**OBTIENE** CONSTANCIA

### RECONOCIMIENTO

1998-1999 GERENCIA DE ASEGURAMIENTO DE CALIDAD DE CIA. CONDUX  
IMPLEMENTACION DEL SISTEMA DE ASEGURAMIENTO DE CALIDAD PARA LA OBTENCION  
DE CERTIFICADO ISO 9002  
CIUDAD DEL CARMEN  
**OBTIENE** RECONOCIMIENTO

2002 GERENCIA DE ASEGURAMIENTO DE CALIDAD DE CIA. CONSTRUCCIONES MARITIMAS  
MEXICANAS S.A. DE C.V.  
AUDITORIA DE SEGUIMIENTO DEL SISTEMA DE ASEGURAMIENTO DE CALIDAD ISO 9001  
CIUDAD DEL CARMEN  
**OBTIENE** RECONOCIMIENTO

### EXPERIENCIA PROFESIONAL

DIBUJO TECNICO INDUSTRIAL  
DISEÑO E INGENIERIA EN CASAS HABITACION

## CURRICULUM VITAE

1980-1987	<p><b>DEPARTAMENTO DE PERFORACION TERRESTRE D.F.N.E. DISTRITO FRONTERA NORESTE REYNOSA TAMP.</b></p> <p>DIFERENTES CATEGORIAS EN EL DEPTO. DE PERFORACION TERRESTRES.</p> <p><b>SERVICIO SOCIAL EN DEPARTAMENTO DE DRENAJE Y ALCANTARILLADO C.O.A.P.A. , REYNOSA, TAMP.</b></p>
1988	<p>PRACTICAS DEPTO. DE CONSTRUCCION MANTENIMIENTO PETROLEOS MEXICANOS DISTRITO D.F.N.E.</p>
A	<p>TENDIDO DE LINEA REGULAR DE GAS DE POZO REYNOSA N.228 A BATERIA EXISTENTE 3.5 KM. LONG.</p>
B	<p>INSTALACION DE CAMISAS ENVOLVENTE EN LINEA REGULAR PARA CRUCE DE CAMINO.</p>
1989 A 1992	<p><b>DEPTO. DE PERFORACION AREA MARINA</b></p> <p>DIFERENTES CATEGORIAS EN EL DEPTO. DE PERFORACION MARINA.</p> <p>CURSO DE SEGURIDAD</p> <p>MANEJO DE EXTINTORES, MANEJO DE MONITORES CON ALTA PRESION PARA FORMAR CORTINAS DE AGUA, SIMULACROS DE INCENDIOS ACCIONANDO POLVOS QUIMICOS.</p> <p>DOS CONATOS DE INCENDIO EN PERFORACION MARINA</p> <p>PRACTICAS DE SOBREVIVENCIA EN EL MAR, EXAMEN EN BOLSA DE TRABAJO PARA AREA MARINA EN PEMEX EN CD. DEL CARMEN, CAMP.</p>
1992 A 1993	<p><b>CONSTRUCTORA RIO SAN JUAN, REYNOSA, TAMP.</b></p> <p>CONSTRUCCION DE 150 CASAS HABITACION DUPLEX, SISTEMA HIDRAULICO, SISTEMA ELECTRICO, IMPERMEABILIZANTES, CON SUPERVISION DE FOVISTE</p> <p>SUPERVISION EN LA CONSTRUCCION DE PLATAFORMAS DE CONCRETO PARA NAVES INDUSTRIALES DE MAQUILADORAS</p> <p>LEVANTAMIENTO TOPOGRAFICO PARA LA URBANIZACION DE COLONIAS POPULARES.</p> <p>DISEÑO Y CALCULO DE LOSAS DE AZOTEA, SISTEMA ELECTRICO PARA LA CONSTRUCCION DE 50 CASAS HABITACION.</p>
1993 A 1994	<p>ELABORACION DE PLANOS ARQUITECTONICOS, DISEÑO, CONSTRUCCION, MANTENIMIENTO A CASAS HABITACION</p>
1994 A 1997	<p style="text-align: center;"><b>GRUPO PROTEXA</b></p> <p style="text-align: center;"><b>CONSTRUCCIONES MARITIMAS MEXICANAS S. A DE C. V.</b></p>
ING. DE CAMPO	<p><b>DIFERENTES EMBARCACIONES</b></p>
JEFE INMEDIATO	<p>ING. CARMEN JIMENEZ PALACIOS</p>
DESARROLLO DE ACTIVIDADES	<p>PROTECCION TERMICA A ESCAPES DE EQUIPOS TURBOCOMPRESORES, TURBOGENERADORES TURBOBOMBAS.</p> <p>INSTALACION DE LINEAS DE SERVICIO , GAS DE ARRANQUE , GAS DE SELLO, LINEAS DE DESFOGUE AL QUEMADOR, INSTALACION DE LINEAS DE SUCCION Y DESCARGA A TURBOCOMPRESORES, TURBOGENERADORES. TURBOBOMBAS</p> <p>FABRICACION E INSTALACION DE BY-PASS PARA DERIVAR FLUJO DE CABEZALES DE PRODUCCION DE 24" DIAM. EN LA PLATAFORMA AKAL-N SIN SUSPENDER LA PRODUCCION DE LOS POZOS, PARA LA INSTALACION DE CABEZAL RECOLECTOR REALIZANDO CORTE EN TAPONES CACHUCHA PARA INTERCONECTAR A TANQUE SEPARADOR DE PRIMERA ETAPA.</p> <p>METROLOGIA, INSPECCION CON ULTRASONIDO PARA DETERMINAR AREAS ADECUADA PARA LA SOLDADURA DE TEE ENVOLVENTE PARA LA REALIZACION DE HOT-TAPPING EN LINEAS DE DIFERENTES EN SRVICIO.</p>

## CURRICULUM VITAE

RETIRO E INSTALACION DE PAQUETERIA DE PLATAFORMAS DE PERFORACION C/APOYO B/G HUASTECO.

DISTRIBUCION DE CONTENEDORES CASETERIA, PRESAS DE LODOS, CUARTOS DE MAQUINAS, SILOS, PRESAS DE LODOS EN CHALAN PARA TRANSPORTE.

INTERCONEXIONES DE LINEAS DE SERVICIOS EN PLATAFORMAS DE PERFORACION.  
SUPERVISOR DE TRABAJOS DE INSPECCION DE BUCEO A BORDO DEL BARCO TARASCO

VOLUMETRIA DE MATERIALES Y ADECUACION DE ELEMENTOS NECESARIOS PARA EFECTUAR RELEVADO DE ESFUERZOS EN SOLDADURA DE CAMPO EN LINEAS DE PROCESO DE 24" DIAM. A 36" DIAM C/ESPESOR 1.500" CON SUPERVISION DE CASA CERTIFICADORA ABS

TENDIDO DE LINEAS REGULAR SUBMARINA DE 16" DIAM., 24" DIAM., A 30" DIAM C/BZA. OLMECA II PLATAFORMA KAX-1 HACIA OCH 1B CON SUPERVISION DE CASA CERTIFICADORA ABS.

PROPUESTA PARA LA INSTALACION DE QUEMADOR EN SEA-PONY CON CARGA DE 18 TON. EN VOLADIZO. SEA PONY KAX-1

SUPERVISION EN LA INSTALACION DE LINEAS DE PROCESO Y DESFOQUE DE SEPARADOR DE GAS, DEPURADOR DE GAS, LINEAS DE DRENAJE PREZURISADO.

ELABORACION DE PROGRAMA DE MANTENIMIENTO A LINEAS SUBMARINAS DE DIFERENTES DIAMETROS, DAÑOS CAUSADOS POR HURACAN ROXANA.

METROLOGIAS DE ARRIBOS A PLATAFORMAS CON APOYO DE PERSONAL DE BUCEO PARA LA FABRICACION E INSTALACION DE CURVAS Y DUCTOS ASCENDENTE EN PLATAFORMAS MARINAS,

METROLOGIA CON APOYO DE PERSONAL Y EQUIPO DE BUCEO DE CONDUX PARA REALIZAR CORTE DE LINEA REGULAR SUBMARINA E INSTALAR CURVA DE EXPANSION C/DUCTO ASCENDENTE COMO UNA SOLA PIEZA CON APOYO DE B/G HUASTECO

LEVANTAMIENTO TOPOGRAFICO Y NIVELACION PARA LA INSTALACION DE LINEA REGULAR DE 36" DIAM. X 1.500". PROYECTO PR-I DOS BOCAS TABASCO

SUPERVISION DE FABRICACION DE SOPORTERIA DE CONCRETO ASI COMO TRINCHERA PARA APOYO DE LINEA REGULAR DE 36" DIAM X 1.500", CON SUPERVISION DE CASA CERTIFICADORA. PROYECTO PR-I DOS BOCAS TABASCO

FABRICACION E INSTALACION DE SISTEMA DE RED CONTRA INCENDIO, SISTEMA DE ASPERSION, SISTEMA DE VALVULAS DE DILUVIO PARA TANQUES SEPARADORES DE PRIMERA Y SEGUNDA ETAPA EN EL PROCESO DE SEPARACION.

PRUEBA HIDROSTATICA A VALVULAS, TUBERIAS DE DIFERENTES DIAMETROS DE LINEAS REGULARES, SPOOLS, VALVULAS DIFERENTES DIAMETROS, INTERCONEXIONES SOBRE CUBIERTA DE PLATAFORMA.

PROCEDIMIENTOS DE TRABAJO PARA LA EJECUCION DE DIFERENTES ACTIVIDADES, INSTALACION DE CUELLOS DE GANZO, APLICACION DE PROTECCION ANTICORROSIVA, INSTALACION DE SOPORTERIA EN LINEAS DE PROCESO DE 36" Ø

ELABORACION DE VOLUMETRIA DE TENDIDO DE LINEAS SUBMARINAS Y TRABAJOS SOBRE CUBIERTA DE PLATAFORMAS DE LICITACIONES EN CONCURSO.

REPRESENTANTE DE CIA. CONSTRUCCIONES MARITIMAS MEXICANAS, S.A. DE C.V. EN EL LASTRADO DE TUBERIA DE 24" X 2 1/4 ESPESOR APLICADO NORMA PEP-LASCON EN PLANTA PERMADUCTO DE ALLENDE, VER.

SUPERVISION EN LA INSTALACION DE TEES DE FIJACION DE ANODOS DE SACRIFICIO APLICANDO NORMAS Y PROCEDIMIENTOS, CON SUPERVISION DE CASA CERTIFICADORA.

APOYO A ASEGURAMIENTO DE CALIDAD EN EL DESARROLLO DE METODOS PARA EL PROGRAMA ISO-9001.

PREPARACION DE PROPUESTA TECNICA DE CONCURSOS DE LINEAS SUBMARINAS E INSTALACIONES SOBRE PLATAFORMA DE PRODUCCION.

ANALISIS DE LICITACIONES EN CONCURSOS.

ASISTENCIA A JUNTAS DE ACLARACIONES DE LICITACIONES EN CONCURSO.

## CURRICULUM VITAE

CORRECCION DE PLANOS PARA ENTREGA DE AS-BUILT.

CONCILIACION DE ESTIMACIONES CON P.E.P. (PEMEX)

PROPUESTAS PARA LA CORRECCION DE PLANOS DE CONSTRUCCION POR AJUSTES DE CAMPO.

1997-1999

### INGENIERO DE PROYECTOS

#### DEPARTAMENTO DE INGENIERIA DE CONSTRUCCIONES MARITIMAS MEXICANAS S.A. DE C.V.

REVISION DE INGENIERIAS, VOLUMETRIAS, REVISION DE PLANOS BATIMETRICOS, ELABORACION E ASBUILT INTERPRETACION DE PLANOS ETC.

OLEOGASODUCTO DE 20" DIAM., X 6.8 KM. DE LONG DE TARATUNICH TE HACIA ABKATUN-H

OLEOGASODUCTO DE 36" DIAM. X 2.7 KM. DE LONG. DE AKAL-L HACIA AKAL-J, UN GASODUCTO DE 30" DIAM. X 5.3 KM. DE LONG. DE AKAL-R HACIA NOCHOH-A Y DE UN GASODUCTO DE 30" DIAM. X 2.6 KM. DE LONG. DE AKAL-H HACIA AKAL-C.

DISEÑO, PROCURA Y ADECUACIONES AL COMPLEJO AKAL-C Y PLATAFORMAS SATELITES ASOCIADAS (EPC-3).

INSTALACION DE PAQUETES DE MEDICION DE DIFERENTES DIAMETROS EN EL COMPLEJO AKAL-"J" Y EN EL COMPLEJO NOHOCH "A" Ø

DISEÑO Y ADECUACIONES AL COMPLEJO AKAL-J, AKAL-N, MODULAR Y PLATAFORMAS SATELITES ASOCIADAS (EPC-2)

PROYECTO OCH-1B/POL-A OLEOGASODUCTO DE 24" DIAM., X 24.0 KM, INCLUYE RAMAL DE 16" DIAM. X 0.9 KM, HACIA KAX-1.

REPARACION DE OLEOGASODUCTO COLECTOR DE 24" DIAM., CAAN-C Y RAMALES 14" DIAM. DAÑOS CAUSADOS POR EL HURACAN "ROXANNE", REPARACION DE CURVA DE EXPANSION Y DUCTO ASCENDENTE EN NOHOCH-B.

REPARACION DE FUGA DE DISPARO DE 8" DIAM. DEL ANILLO DE BOMBEO NEUMATICO DE 20" DIAM. HACIA AKAL-L MEDIANTE LA INSTALACION DE UN HIDROCOPE (DAÑOS OCASIONADOS POR EL HURACAN ("ROXANNE").

CONSTRUCCION DEL PROYECTO OLEODUCTO DE PR-1 DOS BOCAS 36" DIAM., X 80.00 KM. TRAMO II QUE INCLUYE SHORE-APROCHE Y TRAMO III, INTEGRACION DE OBRA ELECTROMECHANICA.

CONSTRUCCION DEL PROYECTO OLEOGASODUCTO DE AKAL-B/PA-ABK-E DE 24" DIAM. X 2.90 KM.

APOYO TECNICO EN EL DESARROLLO DEL PROYECTO RELOCALIZACION E INTERCONEXION DE DUCTO ASCENDENTE Y CURVA DE EXPANSION DE 20" Ø DE AKAL-B HACIA AKAL-N

APOYO EN EL ARMADO DE LA PROPUESTA TECNICA Y ECONOMICA DE LA LICITACION DEL PROYECTO DE LA LINEA DE 20" Ø X 6.8 KMS DE LONGITUD DE TARATUNICH-TE HACIA ABKATUN-H Y DESARROLLO DEL PROYECTO DURANTE SU EJECUCION.

APOYO EN EL DESARROLLO DE LA PROPUESTA TECNICA DEL PROGRAMA DE OBRA, ECONOMICA DEL EPC-22, EPC-23

APOYO EN EL DESARROLLO DE LA PROPUESTA TECNICA DEL PROGRAMA DE OBRA, ECONOMICA DEL PROYECTO DE BAZ DE LA FABRICA DE PINTURAS EN ALTAMIRA TAMPS.

APOYO EN EL DESARROLLO DE LA PROPUESTA TECNICA DEL PROGRAMA DE OBRA, ECONOMICA DEL PROYECTO AKAL-GC

PROGRAMAS DE OBRA DEL PROYECTO EN DESARROLLO DISEÑO, PROCURA Y ADECUACIONES AL COMPLEJO AKAL-C Y PLATAFORMAS SATELITES ASOCIADAS (EPC-3). APOYO EN EL AREA DE INGENIERIA PARA LA CERTIFICACION A ISO 9002 DE LA COMPAÑIA CONDUX S. A. DE C. V.

## CURRICULUM VITAE

### SUPERINTENDENTE DE PROYECTOS DE LINEAS SUBMARINAS GRUPO PROTEXA CONSTRUCCIONES MARITIMAS MEXICANAS S. A. DE C. V.

1999-2000	<p>APOYO EN LA ELABORACION DE CONCURSOS PARA DIFERENTES LICITACIONES</p>
2000-2002	<p>PROYECTO: TERMINACION DE LA INGENIERIA, PROCURA, CONSTRUCCION Y PUESTA EN OPERACION DE 11 DUCTOS MARINOS PRIORITARIOS PENDIENTES DEL EPC-27, (27-06; 27-07; 27-08; 27-09; 27-10; 27-11; 27-16; 27-21; 27-22; 27-27 Y OLEOGASODUCTO DE 24" DE Ø X 1.5 DE AKAL-DB A AKAL-B/E) ; 6 PARA RECOLECCION Y TRANSPORTE DE CRUDO Y 5 PARA DISTRIBUCION DE GAS EN EL SISTEMA DE BOMBEO EN EL CAMPO CANTARELL" IPC-65 AL AMPARO DEL CONTRATO PEP-O-IT-338/00. CON APOYO DE AMBARCACION DB-60, OLMECA 11. BARCO DE POSICIONAMIENTO DINAMICO DB.16, BARCO DE POSICIONAMIENTO DINAMICO MANSAL 18</p>
2002-2003	<p>PROYECTO: SUMINISTRO Y CONSTRUCCION DEL OLEODUCTO DE 24"Ø X 8 KM. DE LA PLATAFORMA DE ENLACE A DISPARO SUBMARINO DE LA LINEA No. 4 EN LA SONDA MARINA DE CAMPECHE PARA EL PROYECTO CRUDO LIGERO MARINO; CONTRATO 418812859.</p>
DESAROLLO DURANTE EL PROYECTO	<p>REVISION DE INGENIERIA DE CONSTRUCCION, REVISION DE FICHAS DE PRECIOS UNITARIOS PARA LA SOLICITUD DE RECURSOS DE PROYECTO, VERIFICACION DE LA ELABORACION DE REQUISICIONES DE MATERIALES PERMANENTES, CONCILIACION CON DEPARTAMENTO DE INGENIERIA DE C. M. M. E INGENIERIA DE LA SUPERVISION DE P. E. P. SOLICITUD DE EMBARCACIONES DE PROYECTO, SOLICITUD DE COTIZACION DE DIFERENTES COMPAÑIAS PRESTADORAS DE SERVICIOS (RACALL, PIVICO, MEXICANA DE RADIOGRAFIAS, MEXSSUB, DIAVAZ, B. J PARA EL SECADO DE DUCTOS CON NITROGENO, REVISION DE COSTOS DE PROYECTO, PROYECCION DE INGRESOS MENSUALES, REVISION DE GRAFICAS DE PORCENTAJE DE RENDIMIENTO MENSUAL, DISTRIBUCION DE GASTOS ENTRE PASIVOS Y DE PROYECTO, ELABORACION DE CORRESPONDENCIA DE PROYECTO HACIA PEMEX CANATRELL NORTE, REVISION DE PROGRAMAS DE TRABAJO REAL CONTRA PROGRAMADO, REVISION Y ELABORACION DE PRESENTACIONES DE SEGUIMIENTO DE OBRA ANTE PEMEX. ASISTENCIA A REUNIONES PARA REVISION DE RENDIMINETO SEMANAL, INTERACTUAR CON LOS DIFERENTES DEPARTAMENTOS PRESTADORES DE SERVICIO DE LOS PROYECTOS.</p>
2003-2005	<p style="text-align: center;">CIA. COTEMAR S.A. DE C. V. DIVISION MANTENIMIENTO COSTA AFUERA</p>
ING. DE CAMPO	<p>JEFE INMEDIATO: ING. ROBERTO MARTINEZ DEL PRADO TELEFONO: 01-938-38-11-400 EXT- 682 CELULAR: 01-938-38-9-06-51 E-mail: <a href="mailto:martinez@cotemar.com.mx">martinez@cotemar.com.mx</a></p>
DESAROLLO DURANTE EL PROYECTO	<p>PROYECTOS DE MANTENIMIENTO REHABILITACION A PLATAFORMAS Y CENTROS DE PROCESO A INSTALACIONES COSTA AFUERA CON APOYO DE UNA PLATAFORMA SEMISUMERGIBLE (CA) CONTRATO No.- 418813807 (EMBARCACION DE POSICIONAMIENTO DINAMICO LANCIA) OBRA SUPERVISADA POR LA GERENCIA DE INSPECCION Y MANTENIMIENTO Y LOGISTICA R.M. S. O. DE PETROLEOS MEXICANOS PROYECTOS DE MANTENIMIENTO REHABILITACION A PLATAFORMAS Y CENTROS DE PROCESO A INSTALACIONES COSTA AFUERA CON APOYO DE UNA PLATAFORMA SEMISUMERGIBLE (CA) CONTRATO No.- 418813814 (EMBARCACION DE POSICIONAMIENTO DINAMICO BRITANIA) OBRA SUPERVISADA POR LA GERENCIA DE INSPECCION Y MANTENIMIENTO Y LOGISTICA R.M.S.O. DE PETROLEOS MEXICANOS</p> <p>CONTROL DE PERSONAL DE CONSTRUCCION 450 TRABAJADORES DE DIFERENTES CATEGORIAS, REVISION DE FICHAS TECNICAS, ELABORACION DE VOLUMETRIAS DE MATERIALES PARA LA SOLICITUD DE MATERIALES MEDIANTE REQUISICIONES, ADMINISTRACION DE RECURSOS DE OBRA EN CAMPO, VERIFICANDO AVANCES DE OBRA, REVISION DE GRAFICAS DE GAM (PROYECTADO CONTRA REAL) REVISION DE GRAFICAS DE AVANCE DE FOLIOS, PLANEACION Y ORGANIZACION DE PROYECTOS EN CAMPO SUPERVISION DE PROGRAMAS DE OBRA, SUPERVISION DE TRABAJOS EN CAMPO, PLANEACION DE LIBRANZA TOTAL DE LA PLATAFORMA AKAL-C2, PLANEACION DE LIBRANZA TOTAL DE LA PLATAFORMA AKAL-C1, PLANEACION DE LIBRANZA TOTAL DE LA PLATAFORMA AKAL-C4, PLANEACION DE LIBRANZA TOTAL DE LA PLATAFORMA AKAL C6 REVISION DE AFECTACIONES DURANTE LA LIBRANZA TOTAL DE PLATAFORMA ABKATUM A COMPRESION,</p>



## CURRICULUM VITAE

ACTIVIDADES DESARROLLADAS: SUSTITUCION DE INTERNOS DE TANQUES SEPARADORES DE SEGUNDA ETAPA, CONVERSION DE TANQUE DE PRIMERA ETAPA A PRIMERA ETAPA, SUSTITUCION DE TANQUES RECTIFICADORES DE GAS POR RECTIFICADORES DE ALTA EFICIENCIA INCLUYENDO INTERCONEXIONES, SUSTITUCION DE ACCESOS, FABRICACION DE CANTILIVERS, ESTRUCTURAS EN GENERAL PROTECCION ANTICORROSIVA, SUSTITUCION DE SISTEMAS ELECTRICOS, VAPORIZADOS EN DIFERENTES LINEAS DE PRODESO, TANQUES, CABÉZALES ETC. SUSTITUCION DE SOPORTERIA PARA TUBERIAS DE DIFERENTES DIAMETROS, DIRECCION DE MANIOBRAS CON APOYO DE GRUA DE LA EMBARACACION BRITANIA, REUNIONES DE GRUPO DE INGENIERIA PARA LA MEJORA CONTINUA DE PROYECTO.

2005-2006

CIA. OCEANOGRAFIA S.A. DE C.V.  
DEPTO. DE CONSTRUCCIÓN

GERENTE

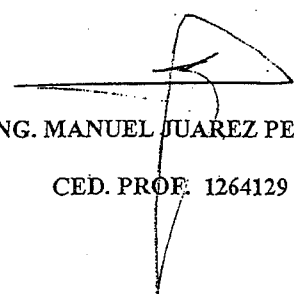
CONTRATO 418235843 "REHABILITACION Y MANTENIMIENTO DE LAS PLATAFORMAS MARINAS CON APOYO DE UNA EMBARACION DE POSICIONAMIENTO DINAMICO B.P.D. CABALLO DE TRABAJO"

2006-2007

CIA. OCEANOGRAFIA S.A. DE C.V.  
DEPTO. LINEAS SUBMARINAS

GERENTE

CONTRATO NO.- 420836811 (KMZ-393) DENOMINADO: "PROCURA Y CONSTRUCCIÓN DE TRES DUCTOS MARINOS PERTENECIENTES A PLATAFORMAS PB-KU-A2, E-KU-A2, PP-MALOB-A Y TAKIN-A : OLEODUCTO DE 24" DIÁMETRO X 7.0 KMS. DE PB-KU-A2 HACIA E-KU-A2 LÍNEA KMZ-48, NITROGENODUCTO DE 24" DE DIÁMETRO X 4.5 KMS. DE INTERCONEXIÓN SUBMARINA DE 24" DIÁMETRO KMZ-35 (PB-KU-S A PP-ZAAP-C) HACIA PP-MALOOB-A LÍNEA KMZ-50 Y OLEOGASODUCTO DE 16 " DIÁMETRO X 10.2 KMS. DE TAKIN-A HACIA INTERCONEXIÓN SUBMARINA CON LÍNEA 122 (OLEOGASODUCTO DE 24 DIÁMETRO DE NOHOCH -C PERFORACIÓN HACIA NOHOCH -A PERFORACIÓN EN LA SONDA DE CAMPECHE, GOLFO DE MÉXICO".



ING. MANUEL JUAREZ PEREZ

CED. PROF. 1264129



## **EXHIBIT 2**

Page 1 of 28

Main Contract #  
PEMEX Kumaza Package I Project, Mexico

in respect of  
Provision of Rock Dumping Services

DREDGING INTERNATIONAL MEXICO S.A. DE C.V.

and  
Between OCEANOGRAPHIA S.A. DE C.V.

No.  
Subcontract Agreement

**Subcontract Agreement**

This Subcontract Agreement is entered into and made effective on \_\_\_\_\_ by and between

**OCEANOGRAFIA S.A. DE C.V.**, whose principal office is at Av. 4 Oriente Lote 5 Mza. D, Puerto Isla del Carmen, C.P. 24140, Ciudad del Carmen, Campeche, Mexico, (herein referred to as the "CONTRACTOR" or alternatively "OCEANOGRAFIA" or "Main Contractor" or "Company").

And

**DREDGING INTERNATIONAL MEXICO S.A. DE C.V.**, whose principal office is at Avenida Costa de Oro 648, Fraccionamiento Costa de Oro, Boca del Rio, Veracruz, Mexico (herein referred to as the "SUBCONTRACTOR" or alternatively "Tideway")

**WHEREAS** the CONTRACTOR has been awarded a contract (herein referred to as the "Main Contract") by PEMEX (herein referred to as "CLIENT" or alternatively "PEMEX") to perform installation of the Package L of the KUMAZA Project (herein referred to as the "Project") and

**WHEREAS** the SUBCONTRACTOR has agreed to execute upon the terms hereinafter appearing the services which are described in this Subcontract Agreement and which form part of the Work to be executed by the CONTRACTOR under the Main Contract.

**NOW THEREFORE** it is hereby agreed as follows

1

**SUBCONTRACT AGREEMENT**

This Subcontract shall consist of this signed agreement and the Exhibits attached thereto as specified herein or as may from time to time be amended in writing executed on behalf of both parties. The Exhibits are:

- Exhibit A - Additional Conditions
- Exhibit B - Scope of Work
- Exhibit C - Payment and Rates
- Exhibit D - Work Schedule

The documents forming this Subcontract Agreement are to be taken as mutually explanatory of one another, but in case of ambiguity, conflict or discrepancy, the documents shall take precedence and be considered in the order as follows:

- Subcontract Agreement
- Exhibit A
- Exhibit B
- Exhibit C
- Exhibit D.

2. SCOPE OF SERVICES

- 2.1 The SUBCONTRACTOR undertakes to perform the works, supplies, products and services specified in the Exhibit B of this Subcontract Agreement related to Provision of Rock Dumping Services in respect of PEMEX Kumaza Rackage L Project, Mexico, hereinafter referred to as the "Services".
- 2.2 The SUBCONTRACTOR undertakes to perform the Services in accordance with this Subcontract Agreement, in a professional and careful manner.
- 2.3 The SUBCONTRACTOR undertakes to supply the documentation described in Exhibit B.
- 2.4 The Services undertaken by the SUBCONTRACTOR according to 2.1 are intended for the Project and will be the SUBCONTRACTOR's responsibilities.

3. TIME OF COMPLETION AND TAKING OVER

- 3.1 Performance of the Services shall be in accordance with the periods as specified in Exhibit D to this Subcontract Agreement, as may be amended in accordance with the provisions herein.
- 3.2 The Services or parts thereof shall be provisionally taken over by the CONTRACTOR at practical completion of offshore work on board the vessel. Upon full completion of the Services a Final Acceptance Certificate shall be issued by the CONTRACTOR to the SUBCONTRACTOR. Partial acceptances during the execution of the services can be made.
- 3.3 Upon final acceptance of as-built documentation, any and all risk of loss or damage occurring thereafter, save any loss or damage caused by the SUBCONTRACTOR and for which the SUBCONTRACTOR is liable under this Subcontract Agreement, shall pass to the CONTRACTOR. A warranty period

of one year after the issue of the Final Acceptance Certificate shall apply for SUBCONTRACTOR's workmanship.

**4. Price and Payment**

4.1 The price for the Services to be performed by the SUBCONTRACTOR shall be as detailed in Exhibit C hereto.

4.2 Payment by the CONTRACTOR to the SUBCONTRACTOR for Services executed in accordance with this Subcontract Agreement shall be made in accordance with the provisions in Exhibit C. Any agreed variations or additions to the Services and/or additional compensation pursuant to the provisions of this Subcontract Agreement shall be paid in accordance with the provisions in Exhibit C.

4.3 Payments shall be made to following banking account of the SUBCONTRACTOR:

DEME CC  
FORTIS BANK  
WARANDEBERG 3  
1000 BRUSSEL  
BELGIUM  
N° 220-0028931-01  
Swift code: GEBABEBB

**5. Liability and insurances**

Liability and insurance provisions are contained in Exhibit A.

**6. GOVERNING LAW AND SETTLEMENT OF DISPUTES**

6.1 This Subcontract Agreement shall be governed by and construed in accordance with the Federal Laws of the United Mexican States.

6.2 All disputes arising out of or in connection with the present Subcontract Agreement shall be finally settled by arbitration in accordance with the Rules of Arbitration of the International Chamber of Commerce by one arbitrator to be appointed in accordance with the Rules. The arbitration proceedings shall be held in Houston and the proceedings shall be conducted in the English language.

7 **Miscellaneous**

7.1 Neither party shall be entitled to assign his rights or obligations hereunder to a third party without the prior written consent of the other party, which shall not be unreasonably withheld.

7.2 This Subcontract Agreement represents the entire understanding between the parties in regard to the subject matter hereof and supersedes all other agreements, oral or written, made with respect to the subject matter hereof. No amendment or change in this Subcontract Agreement shall be effective unless specifically set forth in writing and signed by both parties.

7.3 All written communications between the parties under this Subcontract Agreement shall be made in the English language.

7.4 This Subcontract Agreement shall end when all obligations hereunder have been performed; However, any liabilities and/or rights and obligations that survive the performance of the obligations under this Subcontract Agreement or under the law, shall continue to be in full force and effect until no longer applicable.

8 **Proprietary Information**

8.1 Each Party undertakes that it and its employees and representatives shall keep strictly secret and confidential and not disclose to any Third Party, any and all technical, economic, financial or marketing information, know-how, data or other technology (collectively "Proprietary Information") acquired from the other Party.

8.2 Each Party undertakes that it shall not use any Proprietary Information described in this clause, obtained from the other Party for any purpose whatsoever except for the purpose of assisting in the carrying out of this Subcontract Agreement and for each Party's legitimate internal business purposes relating to its interest in this Subcontract Agreement.

8.3 The restrictions imposed on the Parties pursuant to subsections (8.1) and (8.2) of this Clause, shall not apply to any Proprietary Information:

- (i) which, at the time of disclosure hereunder, is in the public domain;
- (ii) which, after disclosure hereunder, enters the public domain other than by breach of this Subcontract Agreement;

- (iii) other than that obtained from Third Parties, which, prior to disclosure hereunder, was already in the recipient's possession, either without limitation on disclosure to others or subsequently becoming free of such limitation;
- (iv) obtained by the recipient from a Third Party having an independent right to disclose this information; or
- (v) which is made available through discovery by independent research without use of or access to the information acquired from the other Party.

- 8.4 Notwithstanding the restrictions imposed pursuant to subsections (8.1) and (8.2) of this Clause, there shall be no liability for disclosure of Proprietary Information pursuant to a valid judicial or governmental order or similar binding requirements of any legally constituted authority.
- 8.5 The obligations of the Parties under this Clause, shall be valid and enforceable during the term of this Subcontract Agreement and for a period of five (5) years from the expiration or termination of this Subcontract Agreement.
- 8.6 Each Party's obligation to the other Party with respect to Proprietary Information shall be deemed to be fully performed if it observes, with respect thereto, the same safeguards and precautions that it observes with respect to its own Proprietary Information of the same of similar kind.

The authorized representatives of the parties have executed this Subcontract Agreement in duplicate upon the dates indicated below:

For:  
CONTRACTOR

Name: Humberto Estroves

Date: Nov. 23, 2006

For:  
SUBCONTRACTOR

Name: Walter Borge

Date: 7.3. Nov. 2006



**EXHIBIT A/ ADDITIONAL CONDITIONS**

In addition to other conditions contained elsewhere in this Subcontract Agreement, the following additional conditions are applicable:

**A1. PERMITS AND LICENCES**

Prior to the start of the Services, the CONTRACTOR shall arrange and pay for all permits and licences required for the performance of the Services, including but not limited to the Navigation Permit for SUBCONTRACTOR's vessels.

**A2. INDEMNITIES**

In these clauses, CONTRACTOR GROUP shall include CLIENT.

A2.1 The SUBCONTRACTOR shall be responsible for and shall save, indemnify, defend and hold harmless the CONTRACTOR GROUP from and against all claims, losses, damages, costs (including legal costs) expenses and liabilities in respect of:

- (a) loss of or damage to property of the SUBCONTRACTOR GROUP whether owned, hired, leased or otherwise provided by the SUBCONTRACTOR GROUP arising from, relating to or in connection with the performance or non-performance of the Subcontract Agreement; and
- (b) personal injury including death or disease to any person employed by the SUBCONTRACTOR GROUP arising from, relating to or in connection with the performance or non-performance of the Subcontract Agreement; and
- (c) subject to any other express provisions of the Subcontract Agreement, personal injury including death or disease or loss of or damage to the property of any third party to the extent that any such injury, loss or damage is caused by the negligence or breach of duty (whether statutory or otherwise) of the SUBCONTRACTOR GROUP. For the purposes of this Clause A2.1 (c), "third party" shall mean any party which is not a member of the CONTRACTOR GROUP or SUBCONTRACTOR GROUP.

A2.2 The CONTRACTOR shall be responsible for and shall save, indemnify, defend and hold harmless the SUBCONTRACTOR GROUP from and against all



claims, losses, damages, costs (including legal costs) expenses and liabilities in respect of:

(a) loss of or damage to property of the CONTRACTOR GROUP whether

(i) owned by the CONTRACTOR GROUP, or

(ii) leased or otherwise obtained under arrangements with financial institutions by the CONTRACTOR GROUP

which is located at the worksite arising from, relating to or in connection with the performance or non-performance of the Subcontract Agreement; and

(b) personal injury including death or disease to any person employed by the CONTRACTOR GROUP arising from, relating to or in connection with the performance or non-performance of the Subcontract Agreement; and

(c) subject to any other express provisions of the Subcontract Agreement, personal injury including death or disease or loss of or damage to the property of any third party to the extent that any such injury, loss or damage is caused by the negligence or breach of duty (whether statutory or otherwise) of the CONTRACTOR GROUP. For the purposes of this Clause A2.2(c) "third party" shall mean any party which is not a member of the CONTRACTOR GROUP or SUBCONTRACTOR GROUP; and

(d) loss of or damage to all permanent third party oil and gas production facilities and pipelines and consequential losses arising therefrom where such loss or damage is arising from, relating to or in connection with the performance or non-performance of the Subcontract Agreement. The provisions of this Clause A2.2(d) shall apply only to such specified permanent oil and gas production facilities and pipelines which are within a 500 metre radius of any working barge or vessel which is at the time directly engaged in the construction or installation of the Services but not while such working barge or vessel is in transit to or from the area where the Services are to be performed or when performing any other operations. The provisions of this Clause A2.2(d) shall apply notwithstanding the provisions of Clause A2.1(c).

A2.3

Except as provided by Clause A2.1(a), Clause A2.1(b) and Clause A2.4, the CONTRACTOR shall save, indemnify, defend and hold harmless the SUBCONTRACTOR GROUP from and against any claim of whatsoever nature arising from pollution emanating from the reservoir or from the property of the CONTRACTOR GROUP or from any third party property described in

Clause A2.2 (d) arising from, relating to or in connection with the performance or non-performance of the Subcontract Agreement.

A2.4 Except as provided by Clause A2.2(a) and Clause A2.2(b), the SUBCONTRACTOR shall save, indemnify, defend and hold harmless the CONTRACTOR GROUP from and against any claim of whatsoever nature arising from pollution occurring on the premises of the SUBCONTRACTOR GROUP or emanating from the property and equipment of the SUBCONTRACTOR GROUP (including but not limited to marine vessels) arising from, relating to or in connection with the performance or non-performance of the Subcontract Agreement.

A2.5(a) Subject to Clause A2.5(b), the SUBCONTRACTOR shall be responsible for the recovery or removal and when appropriate the marking or lighting of any wreck or debris arising from or relating to the performance of the Services or the property, equipment, vessels or any part thereof provided by the SUBCONTRACTOR GROUP in relation to the Subcontract Agreement, when required by law, or governmental authority, or where such wreck or debris is interfering with CONTRACTOR operations or is a hazard to fishing or navigation and shall, except as provided for in Clause A2.2 and Clause A2.3, save, indemnify, defend and hold harmless the CONTRACTOR GROUP in respect of all claims, liabilities, costs (including legal costs), damages or expenses arising out of such wreck or debris, whether or not the negligence or breach of duty (whether statutory or otherwise) of the CONTRACTOR GROUP caused or contributed to such wreck or debris.

A2.5(b) Notwithstanding the provisions of Clause A2.1, where the CONTRACTOR provides transportation for the property of the SUBCONTRACTOR GROUP to the offshore worksite, and the CONTRACTOR elects to, or is required by law or governmental authority to recover or remove or mark or light any wreck or debris of such property, the CONTRACTOR shall, except as hereinafter provided, save, indemnify, defend, and hold harmless the SUBCONTRACTOR GROUP from and against any claim of whatever nature relating to the costs of such recovery, removal, marking or lighting. Provided, however, that the foregoing indemnity and hold harmless shall not apply to the extent that the recovery, removal, marking or lighting arises as a result of the negligence or breach of duty (whether statutory or otherwise) of the SUBCONTRACTOR GROUP.

A2.6 All exclusions and indemnities given under this Clause A2 (save for those under Clauses A2.1(c), A2.2(c) and A2.5(b)) and Clause A5 shall apply irrespective of cause and notwithstanding the negligence or "breach of duty" (whether statutory or otherwise) of the indemnified party or any other entity or party and shall apply irrespective of any claim in tort, under contract or otherwise at law.

A2.7 If either party becomes aware of any incident likely to give rise to a claim under the above indemnities, it shall notify the other and both parties shall co-operate fully in investigating the incident.

A2.8 Where applicable and if requested by SUBCONTRACTOR in writing, the CONTRACTOR shall make available to the SUBCONTRACTOR details of its other contractors to be present at the worksite as well as of the permanent oil and gas production facilities and pipelines referred to in Clause A2.2(d).

**A3. INSURANCE BY SUBCONTRACTOR**

A3.1 The SUBCONTRACTOR shall arrange as a minimum the insurances set out in this Clause A3 and ensure that they are in full force and effect throughout the life of the Subcontract Agreement. All such insurances shall be placed with reputable and substantial insurers, satisfactory to the CONTRACTOR, and shall for all insurances (including insurances provided by subcontractors) other than Employers' Liability Insurance/ Workmen's Compensation to the extent of the liabilities assumed by the SUBCONTRACTOR under the Subcontract Agreement, include the CONTRACTOR & CLIENT and its and their respective affiliates as additional assureds. All insurances required under this Clause A3 shall be endorsed to provide that underwriters waive any rights of recourse, including in particular subrogation rights against the CONTRACTOR & CLIENT and its and their respective affiliates in relation to the Subcontract Agreement to the extent of the liabilities assumed by the SUBCONTRACTOR under the Subcontract Agreement. Such insurances shall also where possible, provide that the CONTRACTOR & CLIENT shall be given not less than thirty (30) days notice of cancellation of or material change to cover. The provisions of this Clause A3 shall in no way limit the liability of the SUBCONTRACTOR under the Subcontract Agreement.

A3.2 The insurances required to be effected under Clause A3.1 shall be as follows (to the extent that they are relevant to the Services):

(a) Employers' Liability and/or (where the jurisdiction of where the Services are to be performed or under which the employees employed requires the same) Workmen's Compensation Insurance covering personal injury to or death of the employees of the SUBCONTRACTOR engaged in the performance of the Services to the minimum value required by any applicable legislation including extended cover (where required) for working offshore;

(b) General Third Party Liability Insurance for any incident or series of incidents covering the operations of the SUBCONTRACTOR in the performance of the Subcontract Agreement;

(c) Third Party and Passenger Liability Insurance and other motor insurance as required by applicable jurisdiction;

(d) Marine Hull and Machinery insurance including war risk coverage and, to the extent not provided in (e) below, collision liability in respect of all vessels used by SUBCONTRACTOR GROUP in the performance of the Services;

(e) Protection and Indemnity Insurance including wreck and debris removal and oil pollution liability in respect of all vessels, craft or floating equipment owned, leased or hired by the SUBCONTRACTOR GROUP in the performance of the Services.

A3.3 The SUBCONTRACTOR shall supply the CONTRACTOR with evidence of such insurances on demand.

A3.4 The SUBCONTRACTOR shall procure that its subcontractors are insured to appropriate levels as may be relevant to their work.

#### A4. INSURANCE BY CONTRACTOR

A4.1 The CONTRACTOR shall arrange Construction All Risks Insurance including a liability policy on such terms and conditions as are acceptable to the SUBCONTRACTOR. Any costs, other than deductibles not exceeding \$ 50,000, that are excesses to the limits of the Client/ CONTRACTOR's policies or that are resulting from exclusions of those insurances shall be borne by Client/Contractor. The CONTRACTOR agrees that the insurance shall be properly placed and be maintained on the same terms for the benefit of all parties mentioned as assureds for the whole period of the Subcontract Agreement.

A4.2 The insurances arranged under Clause A4.1 shall include the SUBCONTRACTOR, SUBCONTRACTORS and its and their respective affiliates as additional assureds and shall be endorsed to require the underwriters to waive any rights of recourse including in particular subrogation rights against the SUBCONTRACTOR, subcontractors and its and their respective affiliates.

#### A5. CONSEQUENTIAL LOSS AND MAXIMUM LIABILITY

A5.1 For the purposes of this Clause A5 the expression "Consequential Loss" shall mean:

- (i) consequential or indirect loss under applicable law; and
- (ii) loss and/or deferral of production, loss of product, loss of use, loss of revenue, profit or anticipated profit (if any), in each case whether direct or indirect to the extent that these are not included in (i), and whether or not foreseeable at the effective Date of commencement of the Subcontract Agreement.

Notwithstanding any provision to the contrary elsewhere in the Subcontract Agreement and except to the extent of any agreed liquidated damages (including without limitation any predetermined termination fees) provided for in the Subcontract Agreement, the CONTRACTOR shall save, indemnify, defend and hold harmless the SUBCONTRACTOR GROUP from the CONTRACTOR GROUP's own Consequential Loss and the SUBCONTRACTOR shall save, indemnify, defend and hold harmless the CONTRACTOR GROUP from the SUBCONTRACTOR GROUP's own Consequential Loss, arising from, relating to or in connection with the performance or non-performance of the Subcontract Agreement and whether or not arising out of negligence.

A5.2. Subject to the SUBCONTRACTOR having used all reasonable endeavours to achieve completion of the Services and to comply with all of its obligations under the Subcontract Agreement, the SUBCONTRACTOR's total cumulative liability to the CONTRACTOR arising out of or related to the performance of the Subcontract Agreement shall be limited to 50% of the final value of the Services established in accordance with Exhibit C.

EXHIBIT B / SCOPE OF WORK

1. SCOPE OF WORK



### **Scope of Work**

The scope of work of this Subcontract in general comprises of:

#### Survey activities

- Initial detailed MBE survey using the FPROV of the vessel Tideway Rollingstone. This survey data is used to establish the position of the pipelines 48 and 50 and the rock placement scope of work by detailed pipeline engineering performed by CONTRACTOR

#### Pre-lay activities

- Seabed preparation of the coral reef outcrop - Construction of continuous pre-lay supports at the coral reef for the 24" pipelines 48 and 50 to ensure separation between coral reef and pipelines.

#### Post-lay activities

- Post-lay rock placement works to support/stabilize the pipeline at the continuous pre-lay supports.

SUBCONTRACTOR will use the following equipment for execution of the Rock Placement works:

- D.P. Fall Pipe vessel, "Tideway Rollingstone", loading capacity approx. 11,000 tons

#### **1.1 Rock Sources**

The quantity of rock required for the pipelines of the Package L KUMAZA Project will be sourced from one or more quarries from Mexico.

We have based our proposal on the use of the following rock:

1. Quarry from Tuxpan area
2. Quarry from Dos Bocas area.

Tuxpan and/or Dos Bocas port is used for stockpiling the required materials and rock will be loaded by means of a conveyor belt system onboard D.P. Fall Pipe Vessel "Rollingstone".

The following well graded rock sizes are ordered by CONTRACTOR to perform the rock placement works:

- "1 - 3" or "1 - 5" inch rock

## 1.2 Detailed MBE survey route pipelines 48 and 50

4 weeks prior start of the pre-lay rock placement the Rollingstone has to perform an initial MBE insurvey using Reson Seabat 8125 sonar installed at the FPROV. With this information CONTRACTOR is able to establish the final pipeline position horizontally and vertically in relation to the seabed by detailed pipeline engineering. With these results the final pre-lay rock placement scope of work will be determined.

The insurvey of the two pipelines comprises of:

Survey line	: 1 line over the proposed pipeline route
Survey height	: Approx. 18m
Survey corridor	: Approx. 40m
Survey length	: KMZ-48 & KMZ-50, 5,436m + 7,206m = Total survey distance 12,642m.
CONTRACTOR provided info	: The route data (Easting, Northing and KP) of the proposed pipeline routes should be provided by CONTRACTOR prior sailing to survey site (with a minimum of 1 day). Based on previous experience SUBCONTRACTOR has noticed that the seabed conditions in coral reef areas could be completely different compared to the survey data available during the tender phase. If CONTRACTOR decides to extend the above survey scope of work i.e. extending survey lengths and/or corridor, CONTRACTOR shall issue a variation order for such extended survey work to SUBCONTRACTOR 2 weeks prior start of the survey work.

Survey data will be processed on board the vessel and will be made available to CONTRACTOR in order to perform detailed pipeline engineering and to prepare the rock dump scope of work.

The survey results for pipeline surveys will be forwarded as Autocad drawing (.dwg) and presented as follows:

Box 1 Top view - Contours of seabed, grid lines, pipeline route

Box 2 Longitudinal profile - Longitudinal profile and grid lines

Box 3 Cross profile - Cross profiles of seabed at min. 10m interval with pipeline route as centre

In addition also a listing will be provided of the longitudinal profile with KP and depth information (with a 0.3m interval) as an Excel file.



Subject to survey findings in the field the above proposed format may be subject to change, and agreed between SUBCONTRACTOR and CONTRACTOR representatives.

Based on these survey results CONTRACTOR shall perform detailed pipeline engineering to find the optimum/safe pipeline route horizontally and vertically relative to the as-found seabed. From this information the rock placement scope of work described in section 1.3 shall be adjusted.

### 1.3 Pre- & Post-lay Rock dumping – Coral Reef Outcrop Crossing

In the scope of work there are two distinct types of rock placement:

- Pre-lay seabed intervention works – continuous pre-lay rock berm support
- Post-lay pipeline support

These different configurations require different rock placement and survey techniques, although there are similarities and overlaps in the different techniques.

#### 1.3.1 24" Pipeline – KMZ 48

The extent of the full rock placement requirements related to pre-lay Seabed Intervention and post-lay pipeline support for the 24" pipeline (OD=0.75 metres) is as follows:

##### Rock berm specifications:

Drawing	: N-E.32145-1815-30-00476A Rev.1
Pipeline	: 24" Oil pipeline on coral reef
Berm height	: Pre-lay – Various heights* (min. 0.3 metres) Post-lay – Up to halfway top of pipeline
Slope	: Pre-lay – 1 : 2 for berm height < 2 metres and 1 : 3 for berm height > = 2 meters
Top width	: Pre-lay – 10 metres Post-lay – 2 metres (incl. Diameter pipeline)
Type of berm	: Pre-lay & Post-lay – Continuous berm
Length	: Total rock berm length 634 metres Section 1 – KP 0.729 – KP 1.068 = 339 metres Section 2 – KP 1.463 – KP 1.758 = 295 metres
Rock quantity	: 45,000 m3** as provided per Licitacion Anexo C rev.1

##### Note

\* Final Pre-lay berm heights and design will be subject to initial survey and detailed pipeline engineering

\*\* Rock quantity will be subject to initial survey, pipeline engineering and final rock placement scope of work description

24" Pipeline – KMZ 50

The extent of the full rock placement requirements related to pre-lay Seabed Intervention and post-lay pipeline support for the 24" pipeline (OD = 0.75 metres) is as follows:

Rock berm specifications:

Drawing	:	N-F.32145-1815-30-00475 Rev.1
Pipeline	:	24" Nitrogen pipeline on coral reef
Berm height	:	Pre-lay – Various heights* (min. 0.3 metres) Post-lay – Up to halfway top of pipeline
Slope	:	Pre-lay – 1 : 2 for berm height < 2 metres and 1 : 3 for berm height > = 2 metres
Top width	:	Pre-lay – 10 metres Post-lay – 2 metres (incl. Diameter pipeline)
Type of berm	:	Pre-lay & Post-lay – Continuous berm
Length	:	Total rock berm length 797 metres Section 1 – KP 1.353 – KP 1.506 = 153 metres Section 2 – KP 1.635 – KP 2.279 = 644 metres
Rock quantity	:	45,000 m <sup>3</sup> ** as provided per Licitacion Anexo C rev.1

Note: \* Final Pre-lay berm heights and design will be subject to initial survey and detailed pipeline engineering  
 \*\* Rock quantity will be subject to initial survey, pipeline engineering and final rock placement scope of work description

1.3.3 Method description

In order to fulfil the specifications related to maximum span lengths, pipe stresses and separation, at certain locations seabed intervention will take place in order to create stable support and separation with the coral reef for the pipelines. This will be done by means of continuous rock berms with dimensions as required, placed in two stages:

- Pre-lay – An accurately constructed continuous rock berm placed along the pipeline route, on a defined location.
- Post-lay – An accurately constructed continuous rock berm, placed in the pre-lay rock berm area to support/stabilise the whole pipeline.

Pre-lay seabed intervention works

Location and dimensions of the continuous pre-lay rock berm shall be supplied by CONTRACTOR well in advance of operations, for engineering and planning purposes, and from this data a database will be comprised to act as a source and reference during operations.

For the construction of the continuous pre-lay rock berm standard procedure for constructing will be applied as follows:

In the event there are no natural benchmarks, a benchmark will be placed in the vicinity of the work location, to act as reference for survey and dumping operations. This benchmark typically consists of a small-dedicated cone shaped rock berm.

The benchmark is then located by means of the sensors on the ROV, and by prolonged position fixing the absolute position of the benchmark is established.

Prior to all operations a benchmark check will be executed to ensure the highest accuracy for underwater positioning.

A pre-survey in the form of a DTM will be executed, ensuring overlap either side of the designed rock berm, in order to establish a reference for future use (for both rock placement operations and recording of findings), and to determine eventual seabed anomalies.

After the pre-survey has been completed to the satisfaction of the Superintendent, preparations will be made for dumping operations.

The rockberm will be installed by means of strings along the length of the rock berm, next to each other to achieve the specified width. In this manner the rock berm is constructed layer by layer, in order to maintain maximum control during rock placement progress.

The progress of construction is constantly monitored by means of different acoustic profilers, and intermediate or check-surveys when deemed necessary.

The following construction tolerances will be applicable for a pre-lay rock berm :

- 0 / + 0.15 m for the final height compared to the design height and
- +/- 1.5m for the final horizontal position compared to the design position

A post-survey will be executed, and is compared to the pre- and eventual intermediate surveys to establish the fulfillments of the specifications. The results are presented to the Company's Representative, and data is interpreted, and establishing that requirements for the rock berm over the coral reef have been met. After approval and acceptance the Dumping system is recovered and vessel will be demobilized.

Post-lay seabed intervention works

After pipelay is completed the seabed intervention will be finished by placing rock material to the required cover height.

A pre-survey is performed prior any post-lay intervention works. The pre-survey will be used as a reference for the rock placement process, which is executed in the same manner as the pre-lay seabed intervention (placing strings in multiple layers).

Where needed check, or intermediate surveys will be executed in order to fully control the production process, and after installation of the post-lay berm a post-survey is executed in the same manner as the pre-survey.

The post-survey is compared to the pre- and eventual intermediate surveys by physically matching the hardcopies of the profiler scans, thus ensuring that all data are interpreted relative to the pipe position, and establishing that requirements for the seabed intervention have been met.

The following construction tolerances will be applicable for a post-lay rock berm :  
0 / + 0.3 m for the final height compared to the design height

**1.4 Quality Assurance and HSE**

During the execution of the project all safety procedures will be followed. All personnel on board the vessel will have a safety certificate. All our equipment will be in accordance with generally accepted safety requirements and can be inspected prior to mobilisation.

Tideway is ISO 9001:2000 certified and has a standard QA/QC and safety manual for the rock placement works, which can be adapted to the specific requirements of this project.

EXHIBIT C / PAYMENT AND RATES

Schedule of and Rates  
Milestone Payment  
Special Conditions

A handwritten signature in black ink, appearing to be a stylized 'X' or similar mark.A handwritten signature in black ink, appearing to be a stylized 'B' or similar mark.

**SCHEDULE OF PRICES AND RATES**

Purchase, loading, transport and placement of the required rock dumping materials as described under Exhibit B / Scope of work of this document by D.P. Fall Pipe Vessel "Rollingstone":

**1.1 Project Management / Engineering / Procedures / Reports**

Lump Sum USD 25,000.-

**1.2 Mobilisation for rockdumping (based on mobilisation from Tuxpan/Dos Bocas)**

Lump Sum USD 200,000.-

**1.3 Execution of initial detailed MBE survey (Exhibit B, section 1.2)**

Survey time included in our rates:

1.4km / 12.6km X Actual total time required for route survey = Survey time for Rock Placement areas

Survey time not included in our rates and therefore to be reimbursed at applicable working day rate (see section 5.6):

11.2km / 12.6km X Actual total time required for route survey = Survey time for pipeline sections with no Rock Placement

If this survey is executed during a third party commitment any additional sailing from this third party commitment to the work site and back and fallpipe/ROV handling then the additional time has to be reimbursed at applicable vessel day rate.

The execution of this survey is performed 4 weeks prior start of the pre-lay rock placement works.

**1.3 Execution of the pre-lay works (Exhibit B, section 1.3)****1.3.1 Reimbursement**

Reimbursement of the pre- and post-lay rock placement works as stipulated under sections 1.3.2 and 1.3.3 below will be based on the following:

- All tonnes dumped to perform the works have to be reimbursed

- Measurement of actual tonnage dumped is based on weight measurement using the vessel belt weighing system.
- The quantities mentioned in Exhibit B, section 1.3 are for indication only, in the event of less or more tonnes are used this have to reimbursed at applicable rate.
- The quantities mentioned in Exhibit B are indicated in Licitacion Anexo C rev.1 and need to be reviewed after the engineering by CONTRACTOR based upon the results of the Multibeam Survey carried out by SUBCONTRACTOR.

**1.3.2 Pre - Lay works (Exhibit B, section 1.3)**

Description	Unit Rate Per Tonne
Pre-lay-works	USD 135.-

**1.3.3 Post - Lay works (Exhibit B, section 1.3)**

Description	Unit Rate Per Tonne
Post-lay-works	USD 100.-

**1.4 Demobilisation for rockdumping**

**1.4.1 To Tuxpan/Dos Bocas**

Lump Sum USD 100,000.-

**1.4.2 To Europe**

Lump Sum USD 2,048,000.-

**1.4.3 Note**

In case the vessel is demobilised to Europe instead of Tuxpan/Dos Bocas, Mexico and the applicable demobilisation fee to Europe is not covered under the other commitments, the demobilization fee under section 1.4.2 will apply instead of under section 1.4.1.

**1.5 Variation Rates**

Vessel rates

Working

USD 100,000.-/ day

Standby at site

USD 80,600.-/ day

Standby in port

USD 74,400.-/ day



- 1.6 Price List Conditions
- 1.6.1 In USD and exclusive I.V.A.
- 1.6.2 Including Engineering, Project Management and Administration.
- 1.6.3 Including purchase and loading of the required rock materials.
- 1.6.4 Actual tonnes dumped will be used for final payments. Measurement of actual tonnes dumped will be performed by the vessel belt weighing system and subject to verification in accordance with 1.6.13 below.
- 1.6.5 Excluding design.
- 1.6.6 Including the execution of pre and post survey works, executed as per described survey method.
- 1.6.7 Including waiting on weather and mechanical breakdown, however in case of delays caused by Hurricanes extension of time will be granted.
- 1.6.8 Including as Built Documentation, based on FP ROV data.
- 1.6.9 SUBCONTRACTOR reserves the right to combine partial cargo loads with other commitments
- 1.6.10 In the event that "Rollingstone" will have standby due to non-availability of rock placement scope of work, then standby time shall be reimbursed at applicable day rate (see section 1.5)
- 1.6.11 Variations to survey scope of work shall be valued at applicable day rate (see section 1.5)
- 1.6.12 In the event that "Rollingstone" will have standby due to non-availability of rock placement work or standby between survey and start of rock dumping of pre-lay rock berm, then standby time shall be reimbursed at applicable day rate
- Engineering of the rock berms by using Terramodel onboard the vessel, prior start of rock dumping operations, to be reimbursed as standby time only when it means delay of vessel operation
- 1.6.13 The conversion factor (bulk density) from m<sup>3</sup> to ton for the crushed rock is fixed at 1.65. The same fixed conversion factor applies to convert tons loaded to volume loaded under the reimbursement procedure.



#### MILESTONE PAYMENT

CONTRACTOR will compensate SUBCONTRACTOR in accordance with the schedule of prices and rates as in section 1.

Invoices for the work will be submitted and payments will be made in accordance with the following schedule of milestone payments:

Milestone 1, 100% payment at SUBCONTRACTOR's bank account for initial detailed MBE survey prior start of the works.

Milestone 2, 100% payment per cargo load at SUBCONTRACTOR's bank account, one week prior start of loading. Cargo load will be estimated at 11,000 tonnes subject to adjustment on the following load for any increase or decrease of the actual previous load estimate.

Invoice/payment for first cargo load shall include the amount for mobilisation for rockdumping. Invoice/payment for last cargo shall include the amount for demobilisation for rockdumping. SUBCONTRACTOR shall provide a Performance Bond in the amount of USD 750,000 prior first payment.

Payment for compensations at Variation Rates, section 1.5 at SUBCONTRACTOR's bank account within 14 days of receipt of SUBCONTRACTOR's invoice, which shall have the approved variation order attached to it.

Interest for delayed payments shall be automatically and without requirement of any prior notice, run and be due as from the first day of a payment being overdue, at the LIBOR rate plus 2% calculated on a pro-rata basis.

Variations are deviations from the basic works as described in Exhibit B. Section 1.5 contains the rates for these deviations.



3 SPECIAL CONDITIONS

3.1 Void.

3.2 Rates and Sums are valid for the scope and execution of the works in accordance with the work methods described in Exhibit B herein.

3.3 SUBCONTRACTOR has not included for any diving work/inspection works. All pre, intermediate and post lay survey works for the pipeline rockberm supports will be carried out by Fall Pipe ROV Multibeam Echosounder (Seabat 8125 system). Based on above surveys an As Built report will be provided.

3.4 CONTRACTOR's acceptance of rock material shall be given prior to loading the dumping/transport vessel at the quarry.

3.5 Work schedule to be mutually agreed in view of rock supply and start of pre-lay rockberm support scope of work.

3.6 Void.

3.7 The Final Acceptance Certificate shall be given upon approval of as built documentation, i.e. max. period 30 days will be applicable for approval of as built documentation. Provisional Acceptance of the rock dumping works at practical completion on board the vessel.

3.8 SUBCONTRACTOR shall be allowed to work offshore 7 days a week and 24 hrs per day. SUBCONTRACTOR shall be granted free access to and unhindered use of the site. Any delays caused by interruptions of mutually defined and agreed reasonable schedule by third parties on site or near to the site shall be compensated in cost and time.

3.9 SUBCONTRACTOR has no design responsibility for the Services provided, however it shall guarantee the quality of material and workmanship.

EXHIBIT D/ WORK SCHEDULE

The planning is tentative, and will be updated on a weekly basis during progress of the works. The work is planned to start November/December 2006.

Initial detailed MBE survey - approx. 1 day (excluding transits)

Rock Placement works (2 x 45,000m<sup>3</sup>, see Exhibit B, section 1.3) - approx. TBA weeks

Execution of the works to be mutually agreed between CONTRACTOR and SUBCONTRACTOR. Third Parties of current commitments, KUMAZA KU-G, KU-E and KU-H projects, have to agree to release the Rollingstone from their project to allow the works described in this Subcontract Agreement.

SUBCONTRACTOR shall be allowed to give priority to his obligations of current commitments.

SUBCONTRACTOR shall have no liability for damages to CONTRACTOR resulting from planning and actual time of execution of the works/Services.





COTRATO No. 420836811

OBRA : PROCURA Y CONSTRUCCIÓN DE TRES DUCTOS MARINOS PERTENECIENTES A PLATAFORMAS PB-KU-A2, E-KU-A2, PP-MALOOB-A Y TAKIN-A: OLEODUCTO DE 24"Ø X 7.0 KM DE PB-KU-A2 HACIA E-KU-A2 LINEA KMZ-48, NITROGENODUCTO DE 24"Ø X 4.5 KM DE INTERCONEXIÓN SUBMARINA DE 24"Ø KMZ-35 (PB-KU-S A PP-ZAAP-C) HACIA PP-MALOOB-A LINEA KMZ-50 Y OLEOGASODUCTO DE 18"Ø X 10.2 KM. DE TAKIN-A HACIA INTERCONEXIÓN SUBMARINA CON LINEA 122 (OLEOGASODUCTO DE 24"Ø DE NOHOCH-C PERFORACIÓN HACIA NOHOCH-A PERFORACIÓN) EN LA SONDA DE CAMPECHE, GOLFO DE MÉXICO"

## ENROCAMIENTOS EN ARECIFES AFLORANTES, FORMACION DE BERMAS(MONTILUCLOS)

PARTIDA	CONCEPTO	UNIDAD	CANTIDAD	P.U.		IMPORTE		BARCO	INCLUYE
				M.N.	USD	M.N.	USD		
2.4	CRUCE DE LINEA REGULAR SOBRE ARRECIFES AFLORANTES. INCLUYE: SUMINISTRO DE MATERIAL DE ESTABILIZACIÓN, ASÍ COMO TODO EL EQUIPO, MAQUINARIA Y PERSONAL NECESARIO PARA LA REALIZACIÓN DE ESTE TRABAJO. LOS TRABAJOS DEBEN REALIZARSE DE ACUERDO A LA INGENIERÍA DE DETALLE, AL ANEXO "B-1" Y A LOS PLANOS DE REFERENCIA: N-F.32145-1815-30-00476 A, N-F.32145-1815-30-00476 B	MTS3	45,000.00	10.41	259.01	468,450.00	11,655,450.00	ROLLING STONE	SUBCONTRATO DE FORMACION DE BERMAS INCLUYE: ESTUDIO GEOFISICOS, DISEÑO MATERIAL PETREO, FORMACION DE BERMAS Y LEVANTAMIENTO CON ROV
3.4	CRUCE DE LINEA REGULAR SOBRE ARRECIFES AFLORANTES. INCLUYE: SUMINISTRO DE MATERIAL DE ESTABILIZACIÓN, ASÍ COMO TODO EL EQUIPO, MAQUINARIA Y PERSONAL NECESARIO PARA LA REALIZACIÓN DE ESTE TRABAJO. LOS TRABAJOS DEBEN REALIZARSE DE ACUERDO A LA INGENIERÍA DE DETALLE, AL ANEXO "B-1" Y A LOS PLANOS DE REFERENCIA. N-F.32145-1815-30-00475	MTS4	45,000.00	10.41	259.01	468,450.00	11,655,450.00	ROLLING STONE	SUBCONTRATO DE ESTABILIZADO EN ARRECIFES AFLORANTES INCLUYE: RELLENO ENTRE BERMAS, ESTABILIZADO DEL DUCTO Y AS-BUILT FINAL
TOTALES:						936,900.00	23,310,900.00		

## **EXHIBIT 3**

De acuerdo a la sanción aplicada en la estimación N° 10 mostrada en la siguiente tabla tenemos un total de \$ 4,427,693.67 USD POR 102 DIAS DE AFECTACION EN LA SACION

PEMEX EXPLORACION Y PRODUCCION										
CALCULO DE IMPORTE A RETENER EN ESTIMACIÓN No. 10 DEL CONTRATO 4256236R11 KMZ-553										
LINEAS	IMPORTE DE CONTRATO		IMPORTE ENDOGADO HASTA EST. 10		IMPORTE DIFERENCIAL A SANCIONAR		DIAS A SANCIONAR	% DE APLICACIÓN A LA AUDIENCIA NOVENA PRECIO 1	IMPORTE A SANCIONAR	
	MN	USD	MN	USD	MN	USD			MN	USD
OLEOGASODUCTO DE 16" x 10.2 KM. APROX. DE TAHNA.										
	\$ 41,277,386.64	\$ 32,071,603.84	\$ 38,011,388.84	\$ 31,353,469.18	\$ 3,265,998.80	\$ 718,040.66	131.00	0.005	\$ 2,130,221.35	\$ 470,316.63
OLEODUCTO DE 24" x 7.50 KM. DE PB-KU-A2 HACIA E-KU-A2 (KMZ-48).										
	\$ 42,257,697.09	\$ 46,130,466.56	\$ 24,184,338.29	\$ 29,192,734.64	\$ 18,073,318.00	\$ 16,956,703.92	102.00	0.005	\$ 4,225,798.79	\$ 4,615,948.86
NITROGENODUCTO DE 24" x 4.5 KM. DE INTERCONEXIÓN SUBMARINA DE 24" KMZ-55 (PB-KU-S A PP-ZAP-C) HACIA PP-MALOCH-A (KMZ-50).										
	\$ 39,812,173.35	\$ 42,096,019.11	\$ 364,134.67	\$ 15,000,320.29	\$ 36,148,038.78	\$ 26,095,698.82	116.00	0.005	\$ 3,851,217.34	\$ 4,209,601.91
A) IMPORTES A SANCIONAR CONSIDERANDO NO EXCEDER EL 10% DEL CONTRATO POR EVENTO CRITICO									L-TAKIN	\$ 2,130,221.35
									L-KMZ-48	\$ 4,225,798.79
									L-KMZ-50	\$ 3,851,217.34
									L-TAKIN	\$ 657,098.37
B) IMPORTE RETENIDO EN EST. 8									L-KMZ-48	\$ 470,827.46
									L-KMZ-50	\$ -
									L-TAKIN	\$ 4,556,481.23
B) IMPORTE RETENIDO EN EST. 9									L-KMZ-48	\$ -
									L-KMZ-50	\$ -
									L-TAKIN	\$ 3,214,559.25
B) IMPORTE RETENIDO EN EST. 10									L-KMZ-48	\$ 3,754,038.33
									L-KMZ-50	\$ 3,051,217.34
									L-TAKIN	\$ 2,130,221.35
IMPORTE TOTAL A RETENIDO									L-KMZ-48	\$ 4,225,798.79
									L-KMZ-50	\$ 3,851,217.34
GRAN TOTAL A RETENER EN ESTIMACIÓN No. 10										\$ 10,316,204.48

REVISÓ:

ING. ALFREDO GOMEZ RAMOS,  
RESIDENTE DE OBRA

AUTORIZÓ:

ING. MARIO VALDEZ MARRQUEZ  
ENCARGADO DE DUCTOS PEP

ACEPTÓ:

ING. MANUEL JAVIER PÉREZ  
GERENTE DE PROYECTO  
CONTRATISTA

Dando un total de 112 días de afectación y \$ 5,121,221.30 USD nos da una unidad de \$ 45,725.19 USD solo se afectarían los 27.17791667 días de Tide Way siendo un total de **\$ 1,242,715.41 USD**

El tipo de cambio del contrato es MN/10.9113 USD

De acuerdo a la sanción aplicada en la estimación N°9 mostrada en la siguiente tabla tenemos un total de \$ 693,527.62 USD POR 10 DIAS DE AFECTACION EN LA SACION

PEMEX EXPLORACION Y PRODUCCION		CORSEMARTE		CALCULO DE IMPORTE A RETENER EN ESTIMACION No. 9 DEL CONTRATO 420336811 KM2/593		CÁLCULO DE IMPORTE A RETENER EN ESTIMACION No. 9 DEL CONTRATO 420336811 KM2/593		CÁLCULO DE IMPORTE A RETENER EN ESTIMACION No. 9 DEL CONTRATO 420336811 KM2/593	
LÍNEA	IMPORTE DE CONTRATO	IMPORTE PAGADO HASTA EL	IMPORTE DIFERENCIAL A SANCIONAR	IMPORTE DIFERENCIAL A SANCIONAR	IMPORTE DIFERENCIAL A SANCIONAR	IMPORTE DIFERENCIAL A SANCIONAR	IMPORTE DIFERENCIAL A SANCIONAR	IMPORTE DIFERENCIAL A SANCIONAR	IMPORTE DIFERENCIAL A SANCIONAR
OLEODUCTO DE 18" x 10.2 KM. APROX. DE TAPIA-A.	\$ 92,854,959.56	\$ 25,786,986.47	\$ 25,116,518.55	\$ 27,215,317.71	\$ 4,736,649.91	\$ 1,428,331.24	30.00	0.005	\$ 924,036.73
OLEODUCTO DE 24" x 7.05 KM. DE PU-KIAZ HACIA E-KIAZ (KMZ-48)	\$ 39,249,997.51	\$ 44,574,519.11	\$ 14,265,917.58	\$ 23,882,020.84	\$ 24,583,079.93	\$ 20,922,498.27	10.00	0.005	\$ 1,249,154.00
INTERCONEXION SUBMARINA DE 24" KMZ-35 POR KU-S-AT PP-ZAAP-3) HACIA PP-MALOOR-A (KMZ-50)	\$ 39,812,173.35	\$ 42,096,019.11	\$ 384,124.57	\$ 16,800,320.29	\$ 35,145,035.78	\$ 26,095,698.62	24.00	0.005	\$ 4,687,784.65
A) IMPORTES A SANCIONAR CONSIDERANDO NO EXCEDER EL 10% DEL CONTRATO POR EVENTO CRITICO						L-TAKIN	\$ 924,036.73	\$	
						L-KMZ-48	\$ 1,249,154.00	\$	1,048,124.91
						L-KMZ-50	\$ 3,951,217.34	\$	3,131,483.86
B) IMPORTE RETENIDO EN EST. 8						L-TAKIN	\$ 657,099.37	\$	515,739.73
						L-KMZ-48	\$ 470,827.46	\$	433,929.44
						L-KMZ-50	\$	\$	
C) IMPORTE TOTAL A RETENER POR LINEA (A-B)						L-TAKIN	\$ 293,937.35	\$	515,739.73
						L-KMZ-48	\$ 778,326.54	\$	822,195.47
						L-KMZ-50	\$ 3,951,217.34	\$	3,131,483.86
IMPORTE TOTAL A RETENER EN ESTIMACION No. 9 (CABYS)						L-TAKIN	\$ 293,937.35	\$	
						L-KMZ-48 Y	\$	\$	
						L-KMZ-50	\$ 4,729,543.87	\$	3,237,939.60
GRAN TOTAL A RETENER EN ESTIMACION No. 9							\$ 4,996,481.23	\$	3,237,939.60


ING. ALFREDO GOMEZ BARRON  
RESIDENTE DE OARA

AUTORIZO:  
ING. MARCO VALDEZ MARRQUEZ  
SUPERLENDE DE DUCTOS REP.

ACEPTO:  
ING. MANUEL JAVIER PEREZ  
GERENTE DE PROYECTO  
CONTRATISTA



## **EXHIBIT 4**

 <b>SECRETARÍA DE COMUNICACIONES Y TRANSPORTES</b>	<b>COORDINACIÓN GENERAL DE PUERTOS Y MARINA MERCANTE</b> <b>DIRECCION GENERAL DE MARINA MERCANTE.</b> <b>DIRECCION GENERAL ADJUNTA DE MARINA MERCANTE.</b> <b>DIRECCION DE SUPERVISION.</b> <b>SUBDIRECCION OPERATIVA.</b> <b>DERROTERO METEOROLOGICO.</b> <b>CAPITANIA DE PUERTO</b> <b>CD. DEL CARMEN CAMPECHE</b> <b>SECCION REMAFE.</b>
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Oficio No.7.2.517.- 0903/2007.

Cd. del Carmen, Camp. a 05 de Septiembre de 2007

**REPORTE MENSUAL DE CIERRE-APERTURA DEL PUERTO CORRESPONDIENTE AL MES DE:**  
**AGOSTO DE 2007.**  
**CD. DEL CARMEN. CAMP.**


CIERRE/APERTURA PARA EMBARCACIONES MAYORES DE 500 TRB				CIERRE/APERTURA PARA EMBARCACIONES MENORES DE 500 TRB INCL. DELEGACIONES DE PALIZADA E ISLA AGUADA			
DIA	CIERRE	APERTURA	SUB-TOTAL	CIERRE	APERTURA	SUB-TOTAL	MOTIVO
1							
2							
3							
4							
5							
6							
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19							
20	0.33 16:00			12:00			HURACAN DEAN
21	1.00						
22	0.65	15:30	47:30				
23					09:00	69:00	
24							
25							
26							
27							
28							
29							
30							
31							
TOTAL: 1 D 23 H 30 M				TOTAL: 2 D 21H 00 M			

ATENTAMENTE  
EL CAPITAN DE PUERTO

CAP. ALT. VICTOR MANUEL GARCIA ENRIQUEZ



COORDINACIÓN GENERAL DE PUERTOS  
Y MARINA MERCANTE  
DIRECCIÓN GENERAL DE MARINA MERCANTE  
CAPITANIA DE PUERTO

 <p><b>SCT</b> SECRETARÍA DE COMUNICACIONES Y TRANSPORTES</p>	<p align="center"><b>COORDINACIÓN GENERAL DE PUERTOS Y MARINA MERCANTE</b>  <b>DIRECCION GENERAL DE MARINA MERCANTE.</b>  <b>DIRECCION GENERAL ADJUNTA DE MARINA MERCANTE.</b>  <b>DIRECCION DE SUPERVISION.</b>  <b>SUBDIRECCION OPERATIVA.</b>  <b>DERROTERO METEOROLOGICO.</b>  <b>CAPITANIA DE PUERTO</b>  <b>CD. DEL CARMEN CAMPECHE</b>  <b>SECCION REMAFE.</b></p>
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Oficio No. 1144/2007

Cd. del Carmen, Camp. a 05 DE NOVIEMBRE DE 2007.

**REPORTE MENSUAL DE CIERRE-APERTURA DEL PUERTO CORRESPONDIENTE AL**  
**MES: OCTUBRE DE 2007**  
**CD. DEL CARMEN, CAM.**

CIERRE/APERTURA PARA EMBARCACIONES MAYORES DE 500 TRB				CIERRE/APERTURA PARA EMBARCACIONES MENORES DE 500 TRB INCL. DELEGACIONES DE PALIZADA E ISLA AGUADA			
DIA	CIERRE	APERTURA	SUB-TOTAL	CIERRE	APERTURA	SUB-TOTAL	MOTIVO
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23	07:00			00:00			
24							
25		13:00			18:00		
26							
27	24:00			17:00			
28							
29							
30							
31		11:00			15:00		
TOTAL: 05 D 17 H 00 M				TOTAL: 06 D 16 H 00 M			

EL CAPITÁN DE PUERTO.

CAP. ALT. VICTOR MANUEL GARCIA ENRIQUEZ.



**COORDINACIÓN GENERAL DE PUERTOS Y MARINA MERCANTE**  
**DIRECCION GENERAL DE MARINA MERCANTE.**  
**DIRECCION GENERAL ADJUNTA DE MARINA MERCANTE.**  
**DIRECCION DE SUPERVISION.**  
**SUBDIRECCION OPERATIVA.**  
**DERROTERO METEOROLOGICO.**  
**CAPITANIA DE PUERTO**  
**CD. DEL CARMEN CAMPECHE**  
**SECCION REMAFE.**

**Oficio No. 7.2.517. 1267/2007.**

Cd. del Carmen, Camp. a 05 DE DICIEMBRE 2007.

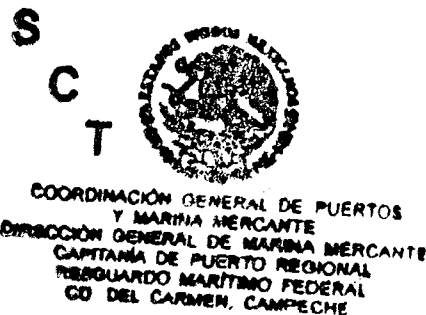
**REPORTE MENSUAL DE CIERRE-APERTURA DEL PUERTO CORRESPONDIENTE AL MES DE:**  
**NOVIEMBRE DE 2007.**  
**CD. DEL CARMEN. CAMP.**

CIERRE/APERTURA PARA EMBARCACIONES MAYORES DE 500 TRB				CIERRE/APERTURA PARA EMBARCACIONES MENORES DE 500 TRB INCL. DELEGACIONES DE PALIZADA E ISLA AGUADA			
DIA	CIERRE	APERTURA	SUB-TOTAL	CIERRE	APERTURA	SUB-TOTAL	MOTIVO
1							
2				16:00			
3					16:00	24	
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	24:00			17:00			
16							
17		12:00	36		15:00	46	
18							
19							
20							
21							
22							
23							
24				17:00			
25							
26	22:00			17:00	09:00		
27							
28							
29		10:00	60		11:00	106	
30							
total	4 d.	0 H.	0 m.	7 d.	8 h.	0 m.	

El capitán de puerto.

CAP. ALT. VICTOR MANUEL GARCIA ENRIQUEZ.

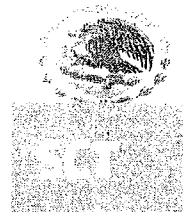
Archivo-Minuta



Oficio No. 7.2.517. 1363 / 2007

Coordinación General de Puertos y Marina Mercante  
 Dirección General de Marina Mercante  
 Capitanía de Puerto de Isla del Carmen

Secretaría de  
 Comunicaciones  
 y Transportes



**REPORTE MENSUAL DE CIERRE-APERTURA DEL PUERTO CORRESPONDIENTE AL MES:**  
**DICIEMBRE/2007.**

CIERRE/APERTURA PARA EMBARCACIONES MAYORES DE 500 TRB				CIERRE/APERTURA PARA EMBARCACIONES MENORES DE 500 TRB INCLUIDAS DELEGACIONES DE ISLA AGUADA Y PALIZADA			
DÍA	CIERRE	APERTURA	SUB-TOTAL	CIERRE	APERTURA	SUB-TOTAL	MOTIVO
1							
2							
3	24:00			19:00			
4							
5		09:00	33 H ✓		10:00	39 H	FRENTE FRÍO
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	24:00			19:00			
16							
17							
18		09:00	57 H ✓		11:00	64 H	FRENTE FRÍO
19							
20							
21							
22							
23	15:00			12:00			
24							
25		10:00	43 H		12:00	48 H	FRENTE FRÍO
26							
27							
28							
29							
30							
31	22:00		02 H	18:00		06	FRENTE FRÍO
TOTAL			135 H	5 D 15 H		157 H	6 D 13 H

EL CAPITAN DE PUERTO.

CAP. ALT. VICTOR MANUEL GARCIA ENRIQUEZ.

## **EXHIBIT 5**



**PEMEX EXPLORACION Y PRODUCCION  
SUBDIRECCION DE INGENIERIA  
Y DESARROLLO DE OBRAS ESTRATEGICAS**

21/03/2008  
01:27:53 p.m.

500

**Anexo "H"**  
**Análisis de Precios Unitarios**  
**LICITACION NUMERO 18575106-021-06**

OBRA : PROCURA Y CONSTRUCCIÓN DE TRES DUCTOS MARINOS PERTENECIENTES A PLATAFORMAS PB-KU-A2, E-KU-A2, PP-MALOOB-A Y TAKIN-A: OLEODUCTO DE 24"Ø X 7.0 KM DE PB-KU-A2 HACIA E-KU-A2 LINEA KMZ-48, NITROGENODUCTO DE 24"Ø X 4.5 KM DE INTERCONEXIÓN SUBMARINA DE 24"Ø KMZ-36 (PB-KU-S A PP-ZAAP-C) HACIA PP-MALOOB-A LINEA KMZ-50 Y OLEOGASODUCTO DE 16"Ø X 10.2 KM DE TAKIN-A HACIA INTERCONEXIÓN SUBMARINA CON LINEA 122 (OLEOGASODUCTO DE 24"Ø DE NOHOCH-G PERFORACION HACIA NOHOCH-A PERFORACIÓN) EN LA SONDA DE CAMPECHE, GOLFO DE MÉXICO

Conc.: 4.11  
Desc.: "TARIFAS DE ESPERA" DE EMBARCACIÓN DE CONSTRUCCION.  
Unidad: DIA  
INCLUYE SPREAD DE EMBARCACIONES, PARA APLICARSE POR SUSPENSIÓN DE TRABAJOS COSTA AFUERA, DE ACUERDO A LOS ANEXOS B Y B-1.

**MATERIALES PERMANENTES**

Numero	Concepto	Cantidad	Uní	Costo MN	Costo USD	Importe M.N	Importe USD
9019	INSPECCION SUBACUATICA SATURACION	1.0000	DIA	-	5,894.68	-	5,894.68
9020	RX, UT INTERCONEXIONES (EN ESPERA)	1.0000	DIA	12,804.00	-	12,804.00	-
9021	PRUEBA HIDROSTATICA EN ESPERA	1.0000	DIA	-	12,276.00	-	12,276.00
	RENDIMIENTO :	1.0000	/DIA		S U M A S :	12,804.00	18,170.68
	(A) IMPORTE MATERIALES PERMANENTES :					12,804.00	18,170.68

**MATERIALES**

Numero	Concepto	Cantidad	Uní	Costo MN	Costo USD	Importe M.N	Importe USD
119956	BASICO DE MATERIALES P/BUCEO DE SAT.	1.0000	DIA	24,193.60	4,665.50	24,193.60	4,665.50
119958	BASICO DE MATERIALES P/BUCEO DE SUPERFICIE DE APOYO A SAT.	1.0000	DIA	3,472.40	-	3,472.40	0.00
119966	BASICO DE MATERIALES P/BARCO DE POSIC. DINAMICO No. 2 EN ESPERA	1.0000	DIA	26,840.32	-	26,840.32	0.00
	RENDIMIENTO :	1.0000	/DIA		S U M A S :	54,506.32	4,665.50
	(A) IMPORTE MATERIALES DE CONSUMO:					54,506.32	4,665.50

**MANO DE OBRA**

Numero	Concepto	Cantidad	Uní	Salario MN	Salario USD	Importe M.N	Importe USD
139956	BASICO DE MANO DE OBRA P/BUCEO DE SAT.	1.0000	DIA	48,461.51	-	48,461.51	0.00
139958	BASICO DE MANO DE OBRA P/BUCEO DE SUPERFICIE DE APOYO A SAT.	1.0000	DIA	25,805.80	-	25,805.80	0.00
139962	BASICO DE MANO DE OBRA BARCO DP DE CONSTRUCCION	1.0000	DIA	45,844.26	-	45,844.26	0.00
139966	BASICO DE MANO DE OBRA P/BARCO DE POSIC. DINAMICO No. 2 EN ESPERA	1.0000	DIA	-	6,718.31	0.00	6,718.31
139972	BASICO DE MANO DE OBRA P/POSIC. DE DUCTOS EN ESPERA	1.0000	DIA	8,886.54	-	8,886.54	0.00
	RENDIMIENTO :	1.0000	/DIA		S U M A S :	128,998.11	6,718.31
	IMPORTE DE MANO DE OBRA					128,998.11	6,718.31
	HERRAMIENTA MENOR (3.00 %)					3,869.94	201.55
	EQUIPO DE SEGURIDAD (3.00 %)					3,869.94	201.55
	(B) IMPORTE MANO DE OBRA:					136,738.00	7,121.42

**MAQUINARIA Y EQUIPO**

Numero	Concepto	Cantidad	Uní	Renta MN	Renta USD	Importe M.N	Importe USD
159956	BASICO DE EQUIPO P/BUCEO DE SAT.	1.0000	DIA	6,600.24	10,800.00	6,600.24	10,800.00
159958	BASICO DE EQUIPO P/BUCEO DE SUPERFICIE DE APOYO A SAT.	1.0000	DIA	9,112.32	-	9,112.32	0.00
159962	BASICO DE EQUIPO P/BARCO DP DE CONSTRUCCION	1.0000	DIA	5,079.36	-	5,079.36	0.00
159966	BASICO DE EQUIPO P/BARCO DE POSIC. DINAMICO No. 2 EN ESPERA	1.0000	DIA	-	62,264.16	0.00	62,264.16
159972	BASICO DE EQUIPO P/POSIC. DE DUCTOS EN ESPERA	1.0000	DIA	-	2,701.20	0.00	2,701.20
	RENDIMIENTO :	1.0000	/DIA			20,791.92	75,765.36





PEMEX EXPLORACION Y PRODUCCION  
SUBDIRECCION DE INGENIERIA  
Y DESARROLLO DE OBRAS ESTRATEGICAS

21/03/2008  
01:27:53 p.m.

500

**Anexo "H"**  
**Análisis de Precios Unitarios**  
**LICITACION NUMERO 18575106-021-06**

OBRA : PROCURA Y CONSTRUCCIÓN DE TRES DUCTOS MARINOS PERTENECIENTES A PLATAFORMAS PB-KU-A2, E-KU-A2, PP-MALOOB-A Y TAKIN-A: OLEODUCTO DE 24"Ø X 7.0 KM DE PB-KU-A2 HACIA E-KU-A2 LÍNEA KMZ-49, NITROGENODUCTO DE 24"Ø X 4.5 KM DE INTERCONEXIÓN SUBMARINA DE 24"Ø KMZ-35 (PB-KU-S A PP-ZAAP-C) HACIA PP-MALOOB-A LÍNEA KMZ-50 Y OLEOGASODUCTO DE 16"Ø X 10.2 KM. DE TAKIN-A HACIA INTERCONEXIÓN SUBMARINA CON LÍNEA 122 (OLEOGASODUCTO DE 24"Ø DE NOHOCH-C PERFORACIÓN HACIA NOHOCH-A PERFORACIÓN) EN LA SONDA DE CAMPECHE, GOLFO DE MÉXICO

Conc.: 4.11

Unidad: DÍA

Desc.: "TARIFAS DE ESPERA" DE EMBARCACIÓN DE CONSTRUCCION.  
INCLUYE SPREAD DE EMBARCACIONES, PARA APLICARSE POR SUSPENSIÓN DE TRABAJOS COSTA AFUERA, DE ACUERDO A LOS ANEXOS B Y B-1.

(C) IMPORTE MAQUINARIA Y EQUIPO:	20,791.92	75,765.36
TOTAL COSTO DIRECTO :	224,840.24	105,722.96
INDIRECTOS (25.00 %) y (20.00 %)	56,210.06	21,144.59
SUMA	281,050.31	126,867.55
FINANCIAMIENTO (1.4500 %) y (0.7000 %)	4,075.23	888.07
SUMA	285,125.54	127,755.62
UTILIDAD (10.00 %)	28,512.55	12,775.56
	313,638.08	140,531.19
CARGOS ADICIONALES (0.8400 %) y (0.5000 %)	2,634.56	702.66
TOTAL DE PRECIO UNITARIO	316,272.64	141,233.84

## **EXHIBIT 6**



SUBDIRECCIÓN DE INGENIERIA Y DESARROLLO DE  
OBRAS ESTRATEGICAS  
GERENCIA DE CONTRATOS



CONTRATO: 420836811  
KMZ-393

"Procura y Construcción de tres Ductos Marinos Pertenecientes a Plataformas PB-KU-A2, E-KU-A2, PP-MALOB-A y TAKIN-A : Oleoducto de 24" Diámetro x 7.0 kms. De PB-KU-A2 Hacia E-KU-A2 LINEA KMZ-48, Nitrogenoducto de 24" de diámetro x 4.5 kms. de Interconexión Submarina de 24" diámetro KMZ-35 (PB-KU-S a PP-ZAAP-C) Hacia PP-Malob-A Línea KMZ-50 y Oleogasoducto de 16" diámetro x 10.2 kms. De TAKIN-A Hacia Interconexión Submarina con Línea 122 (Oleogasoducto de 24" Diámetro de Nohoch -C Perforación Hacia Nohoch -A Perforación en la Sonda de Campeche, Golfo de México".

RESUMEN DE VOLUMENES DE ROCA COLOCADA EN LINEA 48

VOLUMEN TOTAL PRETENDIDO	
LINEA -48	5,831.20 m <sup>3</sup>
LINEA -50	20,533.90 m <sup>3</sup>

VOLUMEN TOTAL DE POST TENDIDO	
LINEA -48	9,919.33 m <sup>3</sup>
LINEA -50	20,626.30 m <sup>3</sup>

ANEXO "C" COBRO DE ESTIMACIÓN N° 9

LINEA 48	9,919.33 m <sup>3</sup>
AJUSTE	2,019.40 m <sup>3</sup>
<b>TOTAL</b>	<b>7,899.93 m<sup>3</sup></b>

Nota: Se cancelan por procedimiento constructivo en los trabajos de pretendido de la línea KMZ-48 el volumen de 2019.4 M3 quedando 3811.8 m3 de 5831.20 m3 los cuales se ajustan en la estimación No.-9


165 dls + IVA.

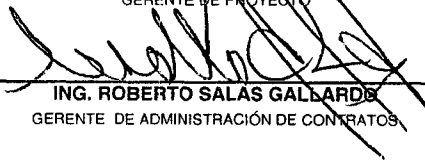
PEMEX EXPLORACIÓN Y  
PRODUCCIÓN

  
ING. ALFREDO GOMEZ RANGEL  
RESIDENTE DE OBRA RMNE

  
ING. RODRIGO VELEZ CALZADA  
INGENIERIA RESIDENCIA DE DUCTOS

OCEANOGRAFIA S. A. DE C. V.

  
ING. MANUEL JUAREZ PEREZ.  
GERENTE DE PROYECTO

  
ING. ROBERTO SALAS GALLARDO  
GERENTE DE ADMINISTRACIÓN DE CONTRATOS